DOCUMENT RESUME

ED 110 773 95 CE 004 583

TITLE	A Statewide Program in Developmental Vocational Guidance (K-12) and Occupational Preparation for the Changing World of Work. Final Report.
INSTITUTION	North Dakota State Board for Vocational Education, Bismarck.
SPONS AGENCY	Bureau of Adult, Vocational, and Technical Education (DHEW/OE), Washington, D.C.
BUREAU NO	V061047A
PUB DATE	31 Aug 73
GRANT	OEG-0-70-4752(361)
NOTE	120p.; For related document, see CE 004 582
EDRS PRICE	MF-$0.76 HC-$5.70 Plus Postage
DESCRIPTORS	Career Awareness; *Career Education; *Demonstration Programs; Elementary Secondary Education; Occupational Guidance; Pilot Projects; Program Attitudes; *Program Descriptions; *Program Evaluation; *State Programs; Tables (Data)
IDENTIFIERS	*North Dakota

ABSTRACT

The final report describes an exemplary three-year program in vocational guidance and occupational preparation in North Dakota designed to integrate career development activities throughout the elementary-secondary curriculum. The program, which involved both teachers and students in a wide variety of career development activities, resulted in the organization of inservice programs for administrators, teachers, and counselors, and the development of career activity guides, an administrator's guide, 75 fifteen-minute television tapes, selected career guidance material, special intensive training programs for school dropouts, and a model career guidance program. An interim evaluation of the program's third year concluded that of all participating groups only guidance personnel participated less than enthusiastically. The final evaluation of the program suggested that even though the exemplary program did not turn into a statewide project as originally planned, the program did accomplish its overall goal of exposing students to the world of work. The report concluded that the career development process needs more emphasis throughout the curriculum and offers two pages of recommendations to that effect. Ten appendixes covering 40 pages provide such information as a bibliography, sample activities, and a summary of the results of the Career Development Summer Institute. (JR)

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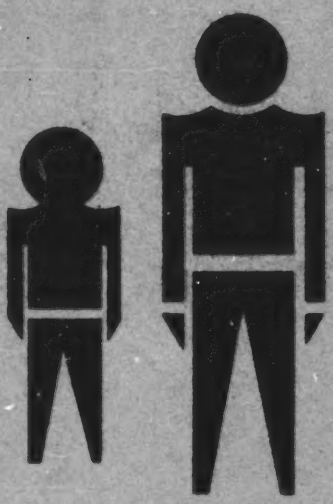

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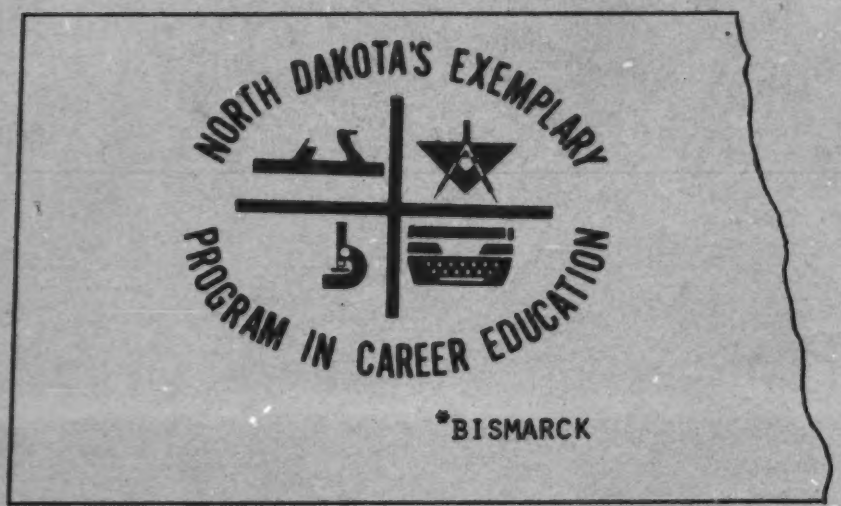
FINAL REPORT



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FINAL REPORT

Project No. V061047A
Contract No. OEG-0-70-4752(361)

A Statewide Program in Developmental Vocational Guidance (K-12) and Occupational Preparation for the Changing World of Work

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Larry Selland, Project Director

State Board for Vocational Education
900 East Boulevard Avenue
Bismarck, North Dakota 58501

Carrol Burchinal, State Director

August 31, 1973

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The Project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

Project Director: Larry Selland
Project Staff: Marvin Kollman
Robert Lamp
Gary Lee
Harry Weisenberger

North Dakota State Board for Vocational Education
State Office Building, 900 East Boulevard
Bismarck, North Dakota 58501

August 31, 1973

TATE BOARD FOR VOCATIONAL EDUCATION

STATE OFFICE BUILDING
900 EAST BOULEVARD AVENUE
BISMARCK, NORTH DAKOTA 58501

(701) 224-2259
CARROL E. BURCHINAL, DIRECTOR AND EXECUTIVE OFFICER

January 4, 1974

Dr. Sidney High, Chief
Program Development and
Operations Branch
Division of Voc.-Tech. Education
U. S. Office of Education
7th & D Streets S.W.
Washington, D. C. 20013

Dear Dr. High:

The North Dakota State Board for Vocational Education hereby submits the Final Report of a Statewide Program in Developmental Vocational Guidance (K-12) and Occupational Preparation for the Changing World of Work for the State of North Dakota.

Career Education emphasizes that education for making a living must be a part of American Education--as are citizenship, health, academic and general education.

Career Education calls for the involvement of every teacher in every classroom in every school. It calls for a total effort of the school and community to help all individuals become familiar with the valves of a work oriented society, to integrate these valves in their lives and to implement these valves in their lives, in a way that work becomes useful, meaningful, and satisfying.

It has been a pleasure to watch the involvement and enthusiasm of the teachers and administrators in the Bismarck Public School System as they initiated the Career Education concept within the Bismarck School System and developed the processes and materials necessary to provide students a more meaningful educational experience.

The project director, project staff, and Bismarck Public School System personnel are to be highly commended for their work.

Respectfully,

Carrol E Burchinal

CARROL E. BURCHINAL
Director and Executive Officer

CEB:cl

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FOREWORD

The main thrust of Career Education is to prepare all persons for a successful life of work by increasing their options for occupational choice and by enhancing learning achievement in all subject areas and at all levels of education. The general goals include:

- To develop favorable attitudes toward the personal, psychological, social, and economic significance of work.
- To develop appreciation for the worth of all types and levels of work.
- To develop skill in decision-making for choosing and changing career directions.
- To develop capability of making considered choices of career goals, based upon development of self in relation to the range of career options.
- To develop capability of charting a course for realization of self-established career goals in keeping with individual desires, needs and opportunities.

The exemplary project in Career Education herein reported is the culmination of three years of activity in the development and field testing of methods, techniques, and strategies for implementing Career Education. The efforts of this project can only be considered as an initial thrust. The concept of Career Education needs continued development in order to become an integral part of the total education process. Success in implementing Career Education will be dependent upon the cooperation between the home, school and community.

-- Larry Selland, Project Director

Bismarck Public Schools

400 AVENUE E EAST
BISMARCK, NORTH DAKOTA 58501

ROBERT P. MILLER
SUPERINTENDENT

VICTOR SOLHEIM
ASST. SUPERINTENDENT
OF INSTRUCTIONAL SERVICES

DAVID J. BLACKSTEAD
ASST. SUPERINTENDENT
OF BUSINESS SERVICES

September 1, 1973

Mr. Larry Selland
Project Director
Career Education
State Office Building
Bismarck, ND 58501

Dear Mr. Selland:

The Bismarck School District is pleased to have been the "Developmental Site" for the North Dakota Exemplary Project in Career Education. We are proud of the contributions our administrators, teachers, counselors and students made toward accomplishing the project goals.

While the full impact of the project will not be determined for some time we feel the project has been successful in many ways. Probably the greatest accomplishment has been in calling to the attention of our teachers the "career development" needs of students. The project has challenged all teachers to assess the relevancy of the subject matter content they seek to teach.

The approach the project used in orienting and involving our teachers in the developmental aspects of the project were very helpful in gaining the confidence of our staff. The activities did not interfere with the classes but rather contributed. It has been a pleasure to observe the enthusiasm many of our teachers have shown towards the career education concept. Your project staff is to be complimented on their dedication to assisting our teachers in developing new methods and techniques to better meet the career development needs of our students.

We are confident that the things that have been learned from the project and the materials that have been developed will be of great value to other schools as they begin to develop and implement the concept. I can assure you that the Bismarck School District has benefited from this project. We know that the successful aspects of this program will be continued long after the termination of the project.

Sincerely,

Robert P. Miller

Robert P. Miller
Superintendent of Schools

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7

ACKNOWLEDGMENTS

The contributions of many persons, groups, and agencies were utilized in fulfilling the objectives of the project and these are gratefully acknowledged.

Special recognition is given to the staff who were employed by the project -- Robert Lamp, Gary Lee, Marvin Kollman, Harry Weisenberger and Ardith Kundert. Their belief in the concept of Career Education and the dedication to their work were invaluable to the success of the project.

Recognition is also given to the following for the cooperation and assistance provided the project:

- The Bismarck Public School District administration, teachers, counselors and students.
- The Bismarck business community.
- The State Board for Vocational Education and their staff.
- The State Department of Public Instruction.
- The North Dakota Board of Higher Education.
- Local education agencies outside the demonstration site that assisted in field testing the project activities.

Through the efforts of these individuals and agencies the project activities were brought to a successful conclusion.

TABLE OF CONTENTS

	Page
FOREWARD	iv
ACKNOWLEDGMENT	vi
LIST OF TABLES AND ILLUSTRATIONS	viii
REPORT SUMMARY	1
STATEMENT OF THE PROBLEM	7
GOALS AND OBJECTIVES	9
PROJECT DESIGN AND PROCEDURES	13
RESULTS AND ACCOMPLISHMENTS	16
Student and Teacher Participation in the Developmental Site.	16
Inservice Training	21
Materials Development	23
Special Projects	27
Guidance and Counseling	32
Information Dissemination	33
Governor's Conference on Career Education	35
EVALUATION	40
Interim Report	40
Final Report	54
CONCLUSIONS AND RECOMMENDATIONS	68
APPENDICES	
Appendix A - Advisory Committee Members	71
Appendix B - Visitors to the Project	73
Appendix C - Summary of the Results of the Career Development Summer Institute	76
Appendix D - Day-on-the-Job	85
Appendix E - List of Published Materials	89
Appendix F - Selected Sample Activities	91
Appendix G - Field Trip Guideline	101
Appendix H - Resource People Guidelines	103
Appendix I - Community Resources Questionnaire	107
Appendix J - Career Education References	109

LIST OF TABLES

Page

Table 1 - Student and Teacher Participation in the Developmental Site 20

Table 2 - Table of Parent Responses 45

Table 3 - Male Occupational Attitude Survey Results - Grades 5-6 Pre Post Mean Scores 49

Table 4 - Female Occupational Attitude Survey Results - Grades 5-6 Pre Post Mean Scores 50

Table 5 - Means, Standard Deviations, and T Values for Grades 7-12 Attitude Survey 52

Table 6 - First Year (1970-71) and Third Year (1972-73) Means for the Four Exemplary Project Committees on Selected Attitudinal Questions 59

LIST OF ILLUSTRATIONS

Page

Illustration I - Project Analysis Chart 17

Illustration II - Project Involvement 18

Illustration III - Project Rationale from Kindergarten Thru Placement 19

REPORT SUMMARY

A. DURATION OF PROJECT

This final report of the exemplary project in Career Education covers the period from July 1, 1970 through August 31, 1973.

B. GOALS AND OBJECTIVES

The broad goals of the project were to provide for (1) occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work; (2) work experience, cooperative education and similar programs, making possible a wide variety of offerings in many occupational areas; (3) students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave school; (4) intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling.

The general objectives of the project are summarized as follows:

1. To provide students with experiences that will:

   a. Develop ability to make career decisions.

      (1) Know own characteristics relevant to career decisions.
      (2) Know the characteristics and requirements of different careers and occupations.
      (3) Relate own personal characteristics to occupat onal requirements.
      (4) Plan for career education or change.

   b. Develop career and occupational capabilities.

   c. Develop skills that are generally useful in the world of work.

      (1) Have generally useful numerical skills.
      (2) Have generally useful communication skills.
      (3) Have generally useful manual-processing and decision-making skills.
      (4) Have generally useful interpersonal skills.

   d. Develop effective work habits.

      (1) Assume responsibility for own behavior.

(2) Plan work.
(3) Use initiative and ingenuity to fulfill responsibilities.
(4) Adapt to varied conditions.
(5) Maintain good health and grooming.

e. Develop positive attitudes toward work.

(1) Recognize the basis of various attitudes toward work.
(2) Hold competence and excellence in high regard.
(3) Seek personal fulfillment through own achievements.
(4) Value work in terms of societal goals.
(5) Pride in work improves quality.

f. Develop a positive image of self.

(1) Understand feelings toward myself and others.
(2) Understand and accept my similarities and differences.
(3) Identify, clarify, accept, or change my values.
(4) Assume responsibility toward self and society.
(5) Recognize inherent capabilities.

2. To acquaint parents with the career development needs of their children.

3. To conduct inservice sessions to upgrade teaching staff.

4. To develop activities for integration into the curriculum.

5. To inform North Dakota residents of the career development needs of students.

C. PROCEDURES FOLLOWED

The general design of the project and the procedures followed were developed in relation to the project objectives. The basic design called for the integration of career development activities throughout the total curriculum. Progress toward fulfillment of the objectives involved a series of related activities, different approaches and various techniques. The following describe the basic procedures of the project:

- The career development activities were presented to the students within the context of the subject matter being taught. A variety of approaches and techniques were used which included role playing, simulation, gaming, field trips, panel discussions, problem solving, demonstrations, small and large group discussions, interviews, films, filmstrips, and many others.

- Contact persons for each elementary school and for each department at the junior and senior high were named to act as liaison

between the project staff and the personnel in the schools.

- The services of various Career Education consultants were utilized for staff development purposes as well as inservice for teachers, counselors and administrators.

- General planning committees were organized at each of the grade levels (1-6), junior high level and senior high level. These were actively involved in developing and field testing career development activities throughout the first year. These working committees met regularly with the project staff at which time the activities were discussed, materials reviewed and techniques for integrating the activity into the curriculum outlined. Each year additional teachers were included in the field testing and evaluation of the career development activities.

- The project staff conducted a thorough review of all the literature, materials, and research available on career development. All materials were made available for review and evaluation by teachers, counselors and administrators. A clearinghouse was established for getting the materials to the teachers.

- Inservice sessions were conducted throughout the system. The first year's activities involved a system-wide workshop followed by small group sessions at the various levels. Teachers were continually exposed to new materials, activities and techniques.

- Numerous informational programs were conducted before service clubs, PTA's, administrators and the general public.

- Special projects were planned and developed to provide exploratory experiences for selected students.

- Special intensive training programs were provided in selected occupations for persons who had left school without job entry skill.

- Curriculum material development was an on-going process throughout the project. Efforts were intensified during the summers when selected teachers and administrators from all levels evaluated the materials, refined the behavioral objectives and techniques and worked on sequencing the materials by grade level and subject matter area.

D. ACCOMPLISHMENTS

The major results and accomplishments include:

- Approximately 250 teachers were involved in career development activities in the demonstration site.

- More than 6,000 students participated in varied degrees in career development activities and experiences.

- Inservice programs were conducted for administrators, teachers, and counselors to acquaint them with the Career Education concept. More than 2,800 persons participated.

- Curriculum activity guides were developed for each grade level K-6 and for the major disciplines grades 7-12. The guides include a comprehensive series of "Career Development" activities which teachers can integrate throughout the curriculum.

- A series of 75 fifteen-minute television tapes were developed using music as a media to develop and reinforce Career Education in the classroom.

- A guide for school administrators which outlines a practical approach for implementing Career Education in a school system was developed.

- Guidelines were developed for utilizing field trips and community resource persons.

- Selected career guidance material was developed and disseminated to guidance programs.

- Special exploratory programs were provided for more than 600 junior and senior level students.

- Intensive training programs provided job entry skill for more than 230 persons who had left school prior to obtaining a marketable skill.

- A model vocational guidance program was developed which involved more than 1,300 students and over 500 parents each year.

- A Governor's Conference on Career Education was called by Governor William L. Guy. More than 450 persons participated.

- Numerous informational meeting were conducted for educators, service clubs, associations and the general public.

E. EVALUATION

An on-going evaluation was conducted by Educational Research Consultants, an independent evaluation team from Fargo, North Dakota. The evaluation included both a process and product assessment. The following is a brief summary of the evaluation report:

"The third year has been the most successful, especially in the willingness of the Bismarck School System Administration to assume responsibility for continuance of the program. This accomplishment was of utmost importance to insure that the program be continued.

"The groundwork done in the development of the materials should provide a good basis to begin other programs in the state. The materials will be of significant value to teachers throughout the state.

"Even though the exemplary project turned into a less than statewide project and might be characterized as a "pilot program" it can be said that the overall goal of exposing students to the world of work was accomplished. The initial statewide proposal was excessively ambitious. Hindsight shows that the program that did evolve was without question the best approach. In the implementation of a concept such as Career Education, with all its implications for education and educators, a slow, orderly, and well devised approach is a necessity. It is the evaluation team's judgement that this had indeed happened. The project must be judged a success."

F. CONCLUSIONS AND RECOMMENDATIONS:

Career Education is a concept that has the potential of becoming the vehicle for making our schools and communities more responsive to the career development needs of all students. It is a practical approach for bringing relevance to the curriculum and humanizing the educational process. It is the general conclusion of the project that the career development process needs to receive more emphasis throughout the curriculum.

The following major recommendations are offered:

- Funding must be made available at the state level to provide staff for leadership and coordination activities.

- State and federal funds must be made available to assist local schools in implementing Career Education.

- Inservice programs must be made available to local schools for staff orientation and developmental activities.

- Local schools must develop a relationship with the business community that will provide observational and actual work experiences for all students. The classroom must go into the community and the community must come into the classroom.

- Career Education programs must embrace the total curriculum.

- State leadership for Career Education should be shared between all education agencies.

- Planning for Career Education in a local educational agency must involve all instructional staff and support personnel.

A. STATEMENT OF THE PROBLEM

The problem area to which the project addressed itself was as outlined in the original proposal. The following summarizes the general problem.

Because North Dakota is a rural, agricultural state, lacking major industry, the youth of the state have little or no opportunity to learn about the range of opportunities available to them in the world of work through observation or direct contact. Therefore, greater pressure is placed on educators and guidance personnel to provide meaningful experiences that will accomplish what many urban children acquire because of living in an urban area. Since many youth leave the state with a limited background, the problem of preparing these young people for work experience and opportunities that they are unfamiliar with takes on greater significance.

Many local school districts are unable to provide financial support necessary to maintain the guidance services. This suggests that a cooperative approach to guidance services among schools will have to be implemented. This lack of guidance personnel will also place a greater responsibility on existing school personnel. With this reliance on current school personnel there will have to be an upgrading of the instructional staff so that they will have the necessary skills to provide these basic guidance services. Many of the teachers in the state, and especially those teaching in the rural areas, have not been exposed to current elementary and secondary vocational guidance concepts. In order to insure that the effort of this project filters down into the curriculum and classroom, a statewide training program will be implemented to provide these teachers with the necessary information and skill to utilize vocational guidance materials in the curriculum.

The great majority of elementary school children and staff do not have the availability of guidance personnel and consultation services. This absence of personnel has, in turn, resulted in a lack of adequate vocational information and material for a large percentage of North Dakota youth. This has resulted in many young people basing vocational and educational decisions on very little vocational information which makes appropriate decisions difficult to achieve.

Another major concern of educators and guidance personnel in North Dakota is the presence of subgroups of disadvantaged young people. There are rural pockets of poverty that have a number of educationally and culturally deprived individuals. Another group that needs increased vocational guidance services is the American Indian. It is felt that encouraging the vocational aspirations of the young people represented in these groups would be partial solution to a number of their problems and result in a general upgrading of these groups, both socially and economically.

Specific Problems to which the project was directed include:

1. Providing students with experiences designed to assist them in evaluating their interests, aptitudes, values and needs.

2. Assisting students in recognizing the range of occupations that exist which would allow them to express themselves and live the type of life they desire.

3. Guiding students in recognizing the economic and social value that different forms of work have in our society.

4. Assisting the student to gain an understanding of the psychological meaning of work as it relates to human experience.

5. Assisting students to understand the intent, nature, and possible end results of alternative pathways compatible with their interests and abilities.

6. Helping students see the broad array of occupations available at local, state, and national levels.

7. Helping students explore some occupations in detail.

8. Helping students to become aware of opportunities and potential satisfaction of different work roles and to gain some understanding of the occupational structure.

9. Directing students to better understand the nature of the decision-making process and assist them in recognizing the kinds of future decisions that must be made.

10. Providing job entry skill through intensive training programs and cooperative education.

By providing increased vocational guidance and counseling for many students, and by providing this same opportunity for those students who have not had access to this service, the occupational aspirations of the students have been increased. By increasing the student's knowledge about vocational opportunities available to them, they have been able to make more meaningful and appropriate vocational decisions.

The early work of Comenius and Dewey and the more recent work of Piaget and Bruner among others have supported the premise that success experiences and the realities of the adult society can be grasped and internalized by even very young children if these concepts are placed in the language system and an experiential framework which is attuned to the readiness level of the children being served.

This project was cognizant of purposeful sequential development rather than development by chance and circumstance as has been too often the case in the past. We have attempted to expose children to career-oriented activities at every level within the context of a vocationally integrated curriculum. It is important that administrators, counselors and teachers recognize that if the present conditions of occupational illiteracy, lack of goal directedness, and non-employability are to be overcome, a broader perception of the many types and degrees of talent necessary to the world of work must be fostered. Emphasis was given from the elementary level forward to the identification and facilitation of the positive elements, strengths and talents, which for each individual represents the best chance for future career success. The project also attended to the fact that students will differ in their approach to career orientations and in their readiness for such thinking because of the high degree of interdependence between one's concept of self, his concept of occupations, and his environmental development. The project has made more comprehensive approaches concerning where children are in their career development, success in learning and in their interest and value formations. In the last analysis the objective of education built around career development through this project has been the individual, not the needs of the labor market.

B. GOALS AND OBJECTIVES

The broad goals for the project were consistent with those set down by the United States Office of Education policy paper AVL V70-1. The specific objectives were based on the following concepts:

1. Specialization leads to interdependency.
2. Geographical location determines kinds of work found therein.
3. Individuals live in a particular geographical location due to the nature of their work.
4. People need to speak well in their work.
5. People need to be able to listen in their work.
6. People need to be able to write in their work.
7. Reading helps people in their careers.
8. The ability to communicate effectively helps a person work well with other people.
9. Understanding of mathematics helps people in their work.
10. Money is the chief form of barter in our society.

11. Having a scientific attitude (problem solving) helps people in their work.

12. Advances in science have altered the occupations that produce goods and occupations that produce services.

13. Some people work to help us stay healthy.

14. There are many jobs associated with physical education.

15. Music, art, and drama give people pleasure.

16. Careers in the fine arts often require special training.

17. There are many jobs associated with fine arts.

18. Self-understanding is important in making career decisions.

19. Leisure time activities affect career choice.

20. Individuals differ in abilities, interests, attitudes and values.

The project determined that the above concepts were sound and should be developed within the curriculum. From this base the broad project goals were transferred into more specific objectives.

I. To provide for broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work. The specific objectives at the various grade levels include:

A. K-3 Level

1. To develop positive attitudes toward the world of work.

2. To provide general observational experiences in the world of work.

3. To present appropriate occupational information about the world of work.

B. Grades 4-6

1. To develop a positive self-concept that will lead to future self-fulfillment in a vocation.

2. To develop wide and varied interests that will open up an expanded basis for vocational choice.

3. To develop the ability to make wise decisions and choices.

4. To have opportunities to express goals and aspirations.

5. To develop a positive attitude toward work and preparation for work.

6. To present appropriate occupational information about the world of work.

7. To provide more specific observational experiences about the world of work.

C. Grades 7-9

1. To provide an opportunity for the student to become acquainted with occupational and educational opportunities in the community.

2. To present information on broad fields of work to assist students in making long-range vocational plans.

3. To help students explore their abilities, interests and aptitudes.

4. To assist in selecting a curriculum that will satisfy student needs.

5. To aid students in developing proper attitudes toward all types of useful work.

D. Grades 10-12

1. To prepare youth to cope with the continued change in the world of work.

2. To acquaint students with major occupational fields.

3. To develop understanding of the need for continued education or training needed in various career areas.

4. To point out relationship between specific high school courses and the jobs for which they can prepare a student.

5. To develop attitudes of respect for cooperation with employers and employees.

6. To provide information regarding employment.

7. To provide students the opportunity to sample occupations through exploratory work experience.

   a. To offer high school students an introduction to the world of work through a variety of part-time jobs in industry, business, or the professions.

   b. To help students gain a better appreciation of skills and abilities needed in various occupations.

8. To provide disadvantaged students the opportunity to investigate a cluster of occupations.

E. Parents

1. To acquaint parents with the career development needs of their children.

2. To provide for cooperative education in a variety of occupational areas. The specific objectives include:

   a. To identify vocational resource people to help orient students to the world of work.

   b. To utilize business and industry in the community as cooperative training and observational stations.

   c. To provide specific training in an occupation through cooperative education.

II. To provide specific training in job entry skills for students not previously enrolled in vocational programs just prior to their leaving school. The specific objectives include:

A. To make available intensive training programs of short duration for students who have just finished high school or have "dropped out" and have not had access to vocational training.

B. To incorporate cooperative education into the intensive training program.

C. To provide intensive training in a variety of occupations.

III. To provide intensive occupational guidance and counseling during the last years of school and assist in initial placement of all students at the completion of their schooling. Specific objectives include:

A. To assist students during their last years of school in their eventual decisions concerning career choice.

B. To assist students in their initial placement in post-high school occupational training.

C. To assist students in their initial job placement.

D. To provide assistance to school dropouts in placement to training programs to obtain job entry skills.

IV. To upgrade the teaching staff, counseling procedures, and the elementary and secondary curriculum.

A. To provide teachers with the materials and techniques to integrate career guidance in their classes.

B. To provide supervisory services for counselors, administrators, and teachers to facilitate the career guidance programs of the local schools.

V. To inform North Dakota residents, through a statewide effort, of the career development needs of students at all levels.

C. PROJECT DESIGN AND PROCEDURES

The general design of the project and the procedures followed were developed in relation to the project objectives. The basic design called for the integration of career development activities throughout the total curriculum. Progress toward fulfillment of the objectives involved a series of related activities, different approaches and various techniques. The following describe the design and strategies of the project.

Project Staff:

The project employed a part-time director, three professional staff, a full-time secretary and a part-time clerk. The primary responsibility of the director was overall coordination, participation in inservice activities and public information. The professional staff worked directly with teachers, administrators and the business community. Their major activity involved teacher orientation, inservice training and assisting teachers in the development and field-testing of curriculum materials.

Developmental Site:

The Bismarck School District No. 1 was the developmental site. The number of schools, teachers and students involved were as follows:

	No. Schools	No. Teachers	No. Students
Elementary	11	179	4,387
Jr. High	3	113	2,050
Sr. High	1	85	1,710
Jr. College	1	73	1,000

It was not the intent of the project to fully implement a Career Education program in the Bismarck School District. Rather, it was designed to develop and field test various approaches to incorporating career development activities into a school system.

Procedures:

The following describe the basic procedures of the project:

- The project was designed at the elementary level to integrate career development activities that would begin development of positive attitudes, self-awareness, and a general understanding of the world of work as it relates to the home, school and community. Individual development continued at the junior high level where students explored their abilities, interests and aptitudes through varied classroom and community activities. The emphasis became more of a direct correlation between specific subjects and the world of work. At the senior high level emphasis was on further exploration and preparation in specific clusters of occupations in line with the students career goals. Intensive guidance and counseling was available. Emphasis was continued on relating subject matter content to the world of work. A career resource center was established to provide current occupational information for students and teachers.

- The career development activities were presented to the students within the context of the subject matter being taught. A variety of approaches and techniques were used which included role playing, simulation, gaming, field trips, panel discussions, problem solving, demonstrations, small and large group discussions, interviews, films, filmstrips, and many others.

- Contact persons for each elementary school and for each department at the junior and senior high were named to act as liaison between the project staff and the personnel in the schools.

- The services of various career education consultants were utilized for staff development purposes as well as inservice for teachers, counselors and administrators. (see Appendix B for list of consultants)

- General planning committees were organized at each of the grade levels (1-6), junior high level and senior high level. These committees were actively involved in developing and field testing career development activities throughout the first year. These working committees met regularly with the project staff at which time the activities were discussed, materials reviewed and techniques for integrating the activity into the curriculum outlined. Each year additional teachers were included in the field testing and evaluation of the career development activities.

- Curriculum material development was an on-going process throughout the project. Efforts were intensified during the summers when selected teachers and administrators from all levels evaluated the materials, refined the behavioral objectives and techniques and worked on sequencing the materials by grade level and subject matter area.

- A project advisory committee representing various education agencies, the business community and the general public was established. The committee met on the average of three times per year to review past project activities and advice on proposed activities (see Appendix A for list of members).

- The project staff conducted a thorough review of all the literature, materials, and research available on career development. All materials were made available for review and evaluation by teachers, counselors and administrators. A clearinghouse was established for getting the materials to the teachers.

- Inservice sessions were conducted throughout the system. The first year's activities involved a system-wide workshop followed by small group sessions at the various levels. Inservice sessions were continued each year of the project. Teachers were continually exposed to new materials, activities and techniques.

- Periodic meetings were held with the administrators to review progress and explain proposed activities.

- Numerous informational programs were conducted before service clubs, PTA's, administrators and the general public.

- Special projects were planned and developed to provide exploratory experiences for selected students.

- Special intensive training programs were provided in selected occupations for persons who had left school without job entry skill.

- A task force of teacher educators was organized to begin working on strategies for incorporating career development into pre-service education programs and to assist in statewide inservice programs.

- A statewide task force of Industrial Arts teachers was organized to plan and discuss the role of Industrial Arts in Career Education.

- The guidance counselors met periodically with the project staff to review materials, discuss projected activities and plan needed career guidance activities.

- All project efforts were coordinated with appropriate persons in the Department of Public Instruction and other related agencies with similar purposes.

The following illustrations are representative examples of the project analysis, project involvement and the project rationale:

D. RESULTS AND ACCOMPLISHMENTS

The true results and accomplishments of the three year exemplary project in Career Education may not be fully determined for years to come. There are many intangibles with the Career Education concept that are difficult to measure. The impact a career development activity has on a second grade student may not be realized for many years. Many of the changes in the curriculum and teacher attitude toward the career development process may not be directly associated with the project activities because of the subtle way it was presented to parents, teachers and administrators.

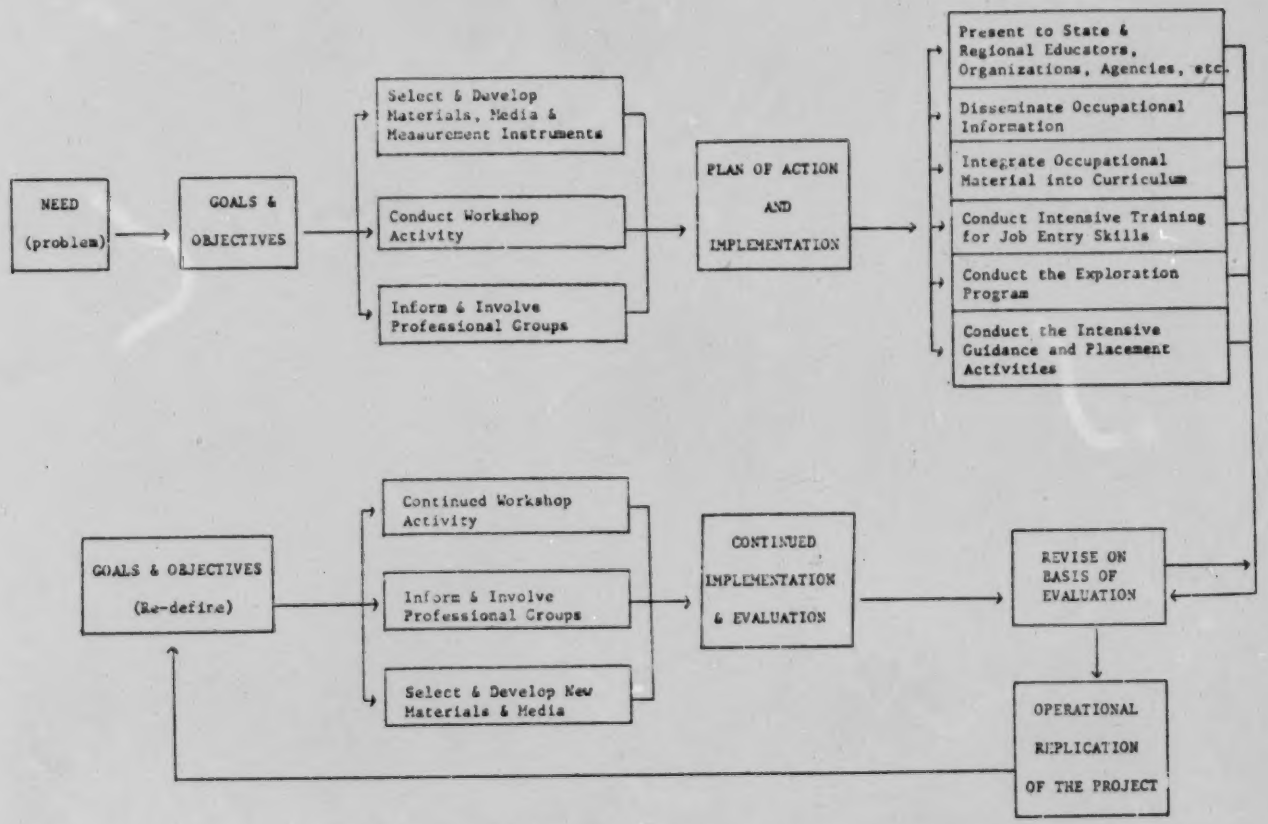
However, at the completion of the three years of project activities, accomplishments are noted according to the following categories:

I. Student and Teacher Participation in the Developmental Site

The table on page 20 indicates the number of Bismarck teachers and students involved in the project.

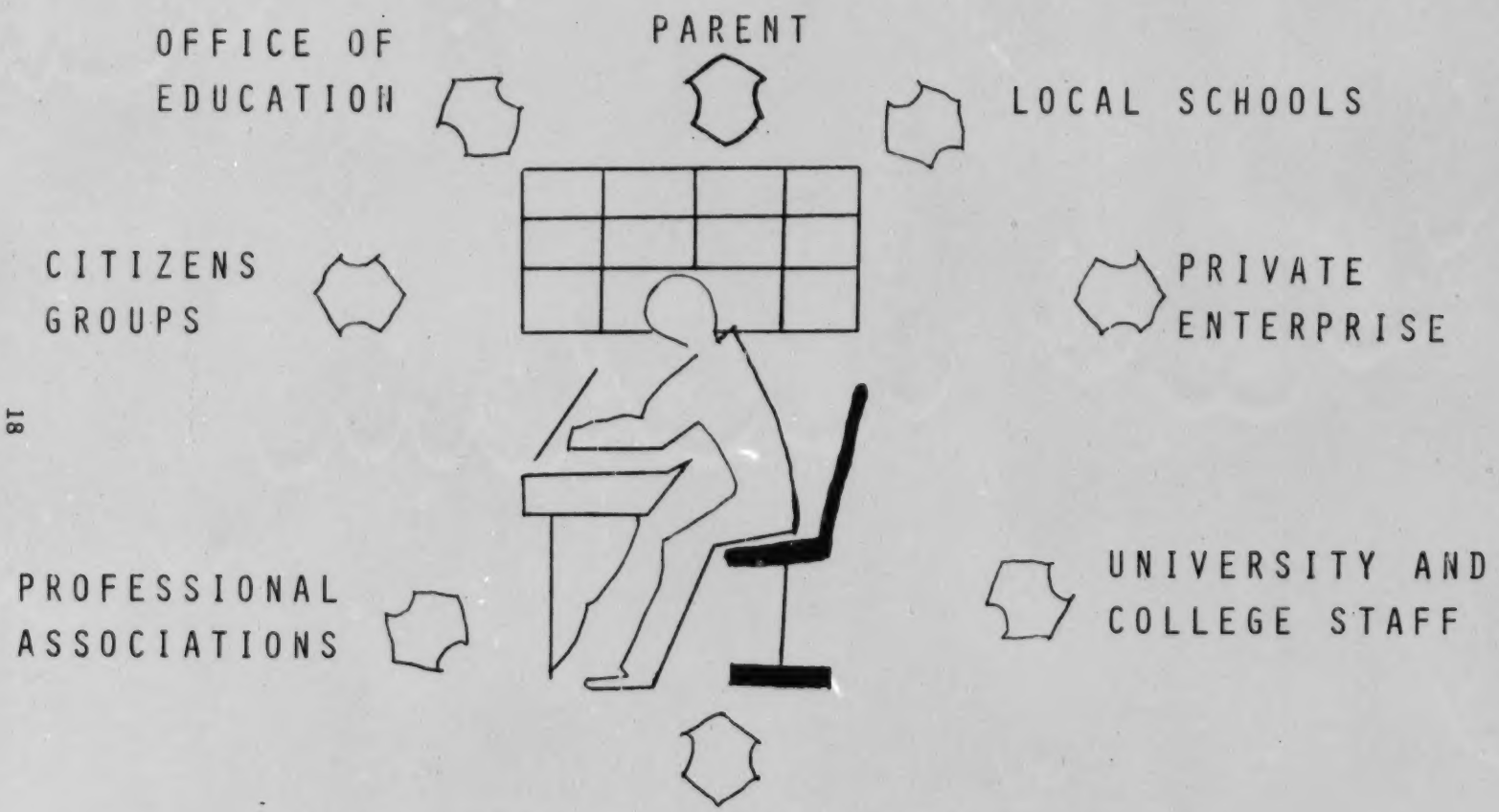
PROJECT ANALYSIS CHART

Illustration I



PROJECT INVOLVEMENT

Illustration II



PROJECT RATIONALE FROM KINDERGARTEN THRU PLACEMENT

Illustration III

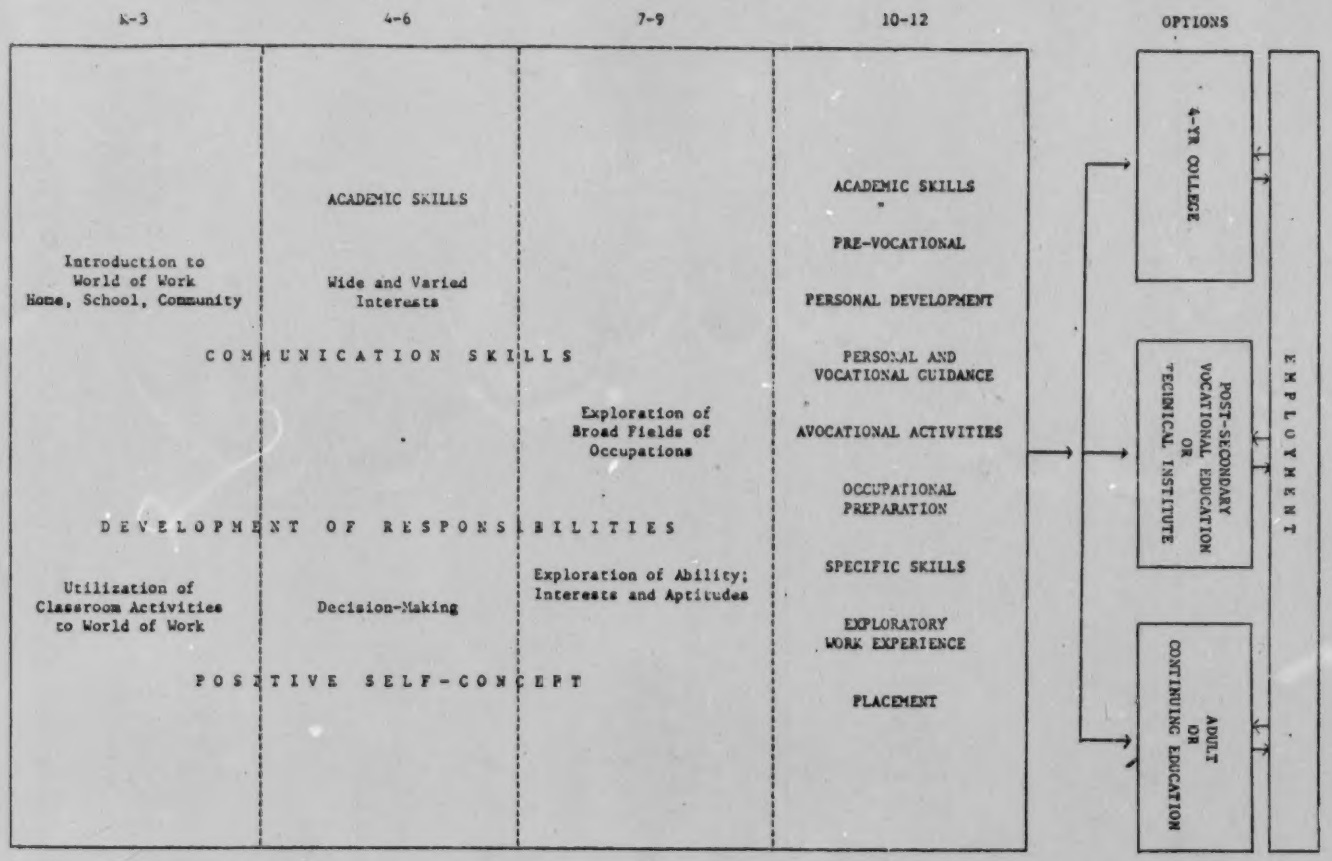


Table 1

School	No. of Students Participating*	No. of Teachers Participating	Out of School Participants
ELEMENTARY			
Grimsrud	376	15	31
Highland Acres	173	6	19
Dorothy Moses	224	8	17
Rita Murphy	204	8	22
Northridge	732	27	56
Pioneer	420	17	39
Richholt	381	17	29
Riverside	320	12	20
Roosevelt	344	13	27
Saxvik	355	15	37
Wachter	210	10	30
Will-Moore	270	12	32
Sub Total	4009	160	359
JUNIOR HIGH			
Hughes	629	20	18
Simle	587	17	17
Wachter	279	11	15
Sub Total	1495	48	50
Bismarck High School	933	45	57
TOTAL	6437	253	466

* The degree of student participation and involvement varies depending upon the teacher.

II. Inservice Training

Probably the greatest accomplishments of the project was in the inservice program. The results of the project are directly related to the extent of inservice activity. A great percentage of the project staff's time and effort was spent in orientation and inservice sessions for administrators, teachers, counselors, and school board members. While most of the inservice was conducted in the developmental site, numerous sessions were conducted statewide.

The inservice activity varied from two-hour sessions to week-long workshops. It included small groups, large groups and one-to-one sessions. The format usually included a combination of lectures, panel discussions, group interaction, audio-visual presentations and problem solving.

The following describe the major inservice activity developed and conducted by the project:

A. Inservice in the Developmental Site

- Sessions were conducted in August, 1970, for all administrators of the Bismarck District. The work session included a discussion of the concept, clarification of the project goals and objectives, review of the principal's responsibilities and preliminary planning for the project.

- A system-wide session for all personnel was conducted prior to the start of each school year.

- Individual and small group sessions were held throughout the duration of the project.

- More than 250 teachers participated in inservice sessions.

B. Inservice Statewide

- Workshops and follow-up sessions were conducted for personnel in the following school districts between 1971 and 1973: (Parenthesis indicates the number involved) Billings County Teachers (30), Beach Elementary (20), Cathedral Parochial, Bismarck (30), Bottineau (55), Cando (30), Cannonball (100), Casselton (45), Devils Lake (100), Enderlin (30), Fargo (480), Fort Totten (20), Minot Public (500), Minot Head Start (15), Minot State College Campus School (15), Linton (65), Napoleon (40), Oakes (35), Pettibone (15), Ray (20), Rugby (50), Solen Elementary (12), Steele (32), Streeter (21), Valley City (100), Warwick (15), West Fargo (50), Williston (125), Wishek (30).

- Career Education was included as a topic of discussion at each of the North Dakota Department of Elementary Principals Winter Conferences in 1971 (276), 1972 (198), and 1973 (136). The 1973 conference was held in Bismarck and devoted entirely to Career Education. Bismarck teachers and principals provided the program.

- The North Dakota Secondary School Principals Association included Career Education on their conference program in 1970 (98), 1971 (110), and 1972 (120).

- Seven Regional conferences were held for superintendents and school board members in 1972. Over 500 persons participated.

- "The Role of Vocational Education in Career Education" was the theme of the 1972 Annual Vocational Conference. Over 400 vocational teachers participated.

- Workshops on Career Education were conducted for school counselors in 1971 and 1972. More than 100 counselors participated in each session.

- Summer workshops of one week in length were conducted in cooperation with the University of North Dakota for Industrial Arts teachers in 1972 and 1973. The IACP program on the "World of Construction" and the "World of Manufacturing" was the workshop content. Twenty teachers participated in each workshop.

- The North Dakota Council of English Teachers Annual Conference, April 1973, included Career Education. Dr. Pauline Garrett, USOE, Denver, and the project staff participated. More than 300 English teachers attended.

- A Governor's Conference on Career Education was held for approximately 500 invited participants representing various groups from throughout the state. The purpose of the conference was to draw attention to Career Education and foster cooperation among the many groups represented. Dr. Duane Mathies, USOE, Washington, D.C. was the keynote speaker.

- Ten one-week workshops were conducted throughout the state during the summer of 1973. The workshops were sponsored by the project in cooperation with the teacher education departments of the state and private colleges and the two universities. Teams of teachers, principals, and counselors were invited to participate. The purpose of the workshops was to discuss, plan, and investigate ways to implement Career Education in their respective schools. Three

hundred and thirty-three persons participated. These teams represented 76 school districts of varying sizes throughout the state.

- A course entitled Career Development Education of graduate level credit was developed in cooperation with the Education Department at North Dakota State University. In addition to offering the course on campus it is offered through the North Dakota State University Extension Division. throughout the state. These classes are being taught by project staff members and others with background in Career Education.

  The course is directed primarily toward teachers, counselors and administrators. It consists of ten three-hour sessions. Emphasis is placed on developing an understanding of the Career Development process and the practical application of Career Education concepts throughout the curriculum.

  More than 286 persons have completed the course. It has been offered in 11 communities. The course will continue to be offered throughout the state.

III. Materials Development

A major accomplishment of the project was the development of "Career Development" guides for teachers and administrators. The materials were developed and field tested by teachers and administrators. All materials are available for dissemination statewide. The following describe the major materials developed as a part of the project:

A. Curriculum Activity Guides - A comprehensive series of "Career Development" activity guides were developed for:

   Kindergarten - This material provides suggested activities, techniques, and resource materials that address themselves to the elements of attitudes, appreciations, self-awareness and career awareness.

   Grade One - The material in this publication is a continuation of many of the activities begun at the kindergarten level. The majority of these ideas deal with self-concept, attitudes and occupational awareness, with the latter suggested as integration mainly into the social studies area with spin-offs into other areas.

   Grade Two - These materials deal with workers in the immediate community along with ideas and activities to

build a positive self-image, positive attitudes toward work and all workers.

Grade Three - Keeping in mind that career development is a developmental process, the material in the Grade Three booklet builds on things started in the previous grades. The workers studied here deal with the expanded community and a certain region of the state.

Grades Four, Five, Six - The materials in each of these books deal with ideas for activities and experiences that address themselves to accomplishment of objectives that deal with the following elements: (1) career awareness, (2) self-awareness, (3) decision-making, (4) appreciations and attitudes, (5) economic awareness, (6) skill awareness, (7) employability skills, (8) educational awareness. The intent is to provide students some expertise in these areas upon which to build in the succeeding years.

All of the grade level materials are set up in a very flexible manner with the suggested grade level merely a suggestion with allowance for teachers to plan a scope and sequence that meets the needs of the students in their particular school.

A series of sample activities are included in the appendix. These are not intended to necessarily be used in exact nature but to be adapted, added to or deleted from, as individual teachers see fit.

Language Arts (Grades 7-12) - This material includes a series of suggested activities, techniques and resource materials relating language arts and career development. The following represent sample activities in the guide:

- Read and discuss biographies regarding personal identity, goals and aspirations, etc.
- Thank you letters to field trip sponsors and resource people.
- Write business letters to acquire occupational information.
- Oral discussion on value of work and value of leisure time.
- Role-play parents or relatives occupation.
- Interview workers and find how they use communication skills in their work.

- Interject communication cluster and discuss occupations directly related to this area.

- Interview an employer and find what reaction he has when an interviewee uses improper grammar.

- Write poems about themselves or a certain occupation.

- Make booklets with magazine pictures of people at work. Pupils and teachers write stories about the pictures.

- Include books about occupations and self-understanding on reading table.

Mathematics (Grades 7-12) - This material includes a series of suggested activities, techniques and resource materials relating math concepts and career development. The following represent sample activities in the guide.

- Use of sale pages to work on a budget.

- Graph number of workers in a variety of career fields.

- Graph trends in the work force.

- Discuss math related occupations.

- Use road maps to teach math concepts to introduce students to use of map.

- Correlate sports and math to capitalize on an interest and to expose students to wide range of careers open in the area of athletics.

- Use teacher or student developed story problems to relate math to real life situations.

Social Studies (Grades 7-12) - This material includes a series of suggested activities, techniques and resource materials relating to social studies and career development. The following represent sample activities in the guide:

- Discussion of social significance of employment, unemployment, welfare, etc.

- Compare career openings from one area of the country to another.

- Discuss how geographical location affects types of work found therein.

- Compare changes in careers throughout history and reasons for change.

- Have students build a model community.

- Conduct games and simulations depicting society.

Science (Grades 7-12) - This material includes a series of suggested activities, techniques and resource materials relating science and career development. The following represent sample activities in the guide:

- While studying various units such as electricity, plants, etc., carry this a step further and help students see career implications, workers involved, etc.

- Give students hands-on experiences in doing experiments (e.g. what chemists do).

- Field trips to greenhouses, electrical plants, state lab, etc. Accent on workers.

- Bring in resource people that are directly involved in science related occupations.

Art and Music (Grades 7-12) - This material includes a series of suggested activities, techniques and resource materials relating art and music and career development. The following represent sample activities in the guide.

- Help students see music as a leisure time activity.

- Research and discuss occupations relating specifically to art.

- Acquaint students with art as an avocation or leisure time activity.

- Draw or paint pictures of different workers.

- Plan a display of tools, hats, and uniforms of various workers.

- Make a mural showing progress of a certain product from beginning to consumption.

B. Television Series - A series of seventy 15-minute tapes were developed using music as a media to develop and reinforce Career Education in the classroom. This World

of Work Music program is carried on television two days per week. It is directed toward the primary grades. A teachers guide accompanies the series.

C. Administrators Guide for Implementation - This guide outlines a practical approach for implementing Career Education in a school system. Emphasis is placed on planning and conducting inservice training for school personnel.

D. Subject Matter Charts - A series of wall charts (24" x 30") were developed which depict subject areas and their many related occupations. These were used extensively by teachers. They were helpful in showing students the many occupations and how each subject area contributed. Charts for fifteen disciplines were developed. More than 1,000 sets were distributed.

E. Field Trip Guide - This guide is a practical outline for teachers to follow in planning and conducting field trips. It includes steps in planning the trip, preparing the students for the trip, and follow-up activities.

F. Resource Person Guide - This guide outlines a practical approach to identifying and utilizing resource people in the community. It includes steps to follow in contacting the person, explaining your expectations and follow-up activities. Sample letters are included.

G. Project FOCUS (Furthering Occupational and Career Understanding for Students) - The project, placed on michro-fiche, presents information on 80 different occupations (similar to Project VIEW). A reader-printer was placed in the guidance department for use by students. Records kept of student usage indicates the material was a valuable guidance tool. Sets of the cards were made available to all guidance programs throughout the state. Additional occupations will be placed on micro-fiche.

IV. Special Projects

A. Summer Exploratory Program in Career Development

The exemplary project contracted with the North Dakota State School of Science to conduct two five-week institutes in career development during each of the summers of 1970, 1971, and 1972. The institutes proved successful and are being continued with local and state funding.

The purpose of the program is to broaden students knowledge of the opportunities available in the world of work. This

was accomplished through a "hands-on" type of activity. The students received experience in fifteen different clusters of occupations.

The target population was students in grades eleven and twelve. Approximately 200 students were served in each institute. In addition to students from the "Developmental Site", participants were served from throughout the state. Priority was given to students who had not had access to vocational education and were uncertain as to career choices.

The main objectives of the career development institute were to broaden the students' background in occupational areas in regard to:

- The type of work he would do.

- The skills necessary for a particular occupation.

- The education requirements and where offered.

The program also provided the participants an opportunity to:

- Work with the machines in each occupational area.

- Improve their reading skills.

- Test their aptitudes and skills in each area.

See Appendix C for more information.

B. Intensive Training Programs

Intensive training programs were initiated in various occupational areas for students not previously enrolled in vocational education or who had left school without a marketable skill and were unable to continue their education. The programs provided job entry skills in different occupational areas. The exemplary project contracted with the Bismarck Junior College to offer, during the summer, training in the following areas: production typist and office duplicating skills, cashier checker training, nurses aide, and service station attendant.

Similar programs were offered outside the demonstration site at the University Center in Williston, Lake Region Junior College and at Dickinson's Area Vocational School.

These programs were developed through cooperation with business and industry representatives from the various

occupational areas. The programs were conducted during the summer and each contained a cooperative aspect. In a number of the schools these programs have become a part of the school's regular program and are available during the year.

More than 230 students were served over the three summers. The one-year follow-up reports indicate about 60.0% are placed in work and about 30.0% are continuing their training in a post-secondary program. As vocational programs become more accessible at the secondary, post-secondary and adult levels and as they become more flexible in "open-entry-open-exit" structure there will be less need for the special intensive programs.

C. Model Vocational Guidance Program

A model vocational guidance program was initiated in the Bismarck District the second year of the project. The program was funded by the exemplary project for two years and is now being continued as a regular part of the Bismarck guidance program. The objectives of the program are:

- To help students make better decisions by knowing more about their abilities and interests.

- To involve parents with the educational process of their children at the junior and senior high school level.

- To become better acquainted with the student and better acquaint the student with his new situation at the high school.

- To become better acquainted with personal, social and educational problems which could prevent a student from successfully completing a high school program.

The specific activities included:

- All ninth grade students were given the General Aptitude Test Battery in February 1971. A period of two days was spent at each junior high school. The written part of the test was given during two class periods, an hour a day. Two counselors were used for giving the written part of the test. The teachers of the classes were used to help counselors monitor the test. Three counselors and a secretary gave the dexterity tests. There were no more than six students at one table for each counselor.

- Prior to the closing of the regular school term, letters

were sent to the parents of the students entering tenth grade. The letters explained the purpose of the program and the date of a scheduled conference with one of the counselors. A postal card was enclosed requesting commitment to the scheduled conference or a change in time. Parents were requested to return the postal card within a week. If the cards were not returned or if parent or student did not come to the conference at the time assigned, a phone call was made. The call usually resulted in arranging another time for the conference, or a discussion was held by telephone of the child's program or problems if a conference could not be arranged.

- The conferences, scheduled on a 45-minute basis, were held in the counselors' offices in the senior high school.

- The direction of the individual conferences was determined by the needs of the student and the parents.

- All tenth grade students were given the Kuder Occupational Interest Survey, Form DD, in November, 1971. This was a continuation of vocational exploration after the student has taken the General Aptitude Test Battery, and the results were interpreted to the student and the parents. An hour was used for taking the inventory. In December, after the results were mailed back, each counselor was assigned certain classes in which he interpreted the results. The counselor also talked about vocational trends and has the class discuss occupations in general. Each counselor also described the different vocational materials available in the guidance office and the library.

- The students included in the program were all tenth graders starting Bismarck High School, with special recognition given to disadvantaged and handicapped students. A card was completed by the referring schools giving the reason for the recognition of the student.

- Letters of invitation to the parents of students were sent out two weeks in advance. In most instances, one or both parents came with the student for the conference. The conferences centered around the student's program plan for his high school career and future vocational plans. Many program plans were changed as a result of the conferences and a more realistic program of subjects was selected in line with the student's aptitude and abilities. A written report was completed by the counselors for each conference, and this will become a part of the student's premanent record.

The statistical summary of the program is as follows:

Number of Students Given the General Aptitude Test Battery

Students from:	1971	1972
Simle Junior High School	270	273
Hughes Junior High School	272	275
Wachter Junior High School	103	108
Total	645	656

Number of Students Taking the Kudder Vocational Interest Survey

Students from High School	637	638

Parent and Student Conferences Held

Students with parents	484	525
Students alone	46	31
Telephone conferences	84	27
Total	614	583
Couldn't contact	24	37
Number of incoming sophomores	638	627

See Appendix D for additional information about the programs.

D. Day-on-the-Job

The Day-on-the-Job program was designed to offer students an opportunity to work with and observe a typical days work in a career field that matches their interests and aptitudes. The objectives of the program were (1) to assist students in determining career goals and life styles, (2) to assist students in planning and implementing appropriate educational programs, and (3) to offer students the opportunity for work observation and learning that will enhance the decision-making process and eventually a wiser career choice.

The Day-on-the-Job will not make students experts in careers, nor will it prepare them to make definite commitments. It does, however, broaden their horizons and give them insight for planning their goals with fewer frustrations or dead-end starts.

More than 40 students participated in this project each of the two years that it was conducted. The cooperation from the business community was excellent. The students that participated were identified by the counselors and teachers. (See Appendix D for more information).

E. Exploring the Trades

An exposure to various trades was incorporated into the ninth grade Industrial Arts program at Hughes and Wachter Junior High schools. The project was accomplished in cooperation with the Association of General Contractors Education Committee. The committee arranged for skilled craftsmen in the areas of bricklaying, plumbing, electrical and civil engineering to spend one week with the Industrial Arts classes. In addition to explaining their trade they supervised actual student participation in "mock-up" situations. The craftsmen were provided by their employers at no cost to the school. Plans are to make such services available to additional schools and in additional occupational areas.

V. Guidance and Counseling

Guidance is the basic core of the career development program. The counselors were involved directly or indirectly in all of the project activities. In addition to their direct contact with students regarding career development they served as an excellent resource to the teachers.

Some of the specific accomplishments regarding guidance and counseling include:

- The development of expanded occupational information in each school. The resource information was added to and made more accessible to both students and teachers.

- A career information center at Bismarck High School was established. A separate area was set aside to display occupational information. Students could drop in at any time. Teachers would conduct classes in the center when the lesson required access to career information sources.

- A follow-up questionnaire was developed in cooperation with the guidance department of Bismarck High School. The questionnaire was sent to the Bismarck High School graduates of 1967, 1969 and 1971. The findings of the survey were used in developing a model "follow-up" questionnaire for state wide dissemination to be used for improvement of guidance functions, specifically in career development.

- The Career Education concept was presented to three workshops for elementary guidance designates held at Mary College, Bismarck, North Dakota. A staff member covered the background, philosophy and rationale for the Career Education program. After discussing these areas, the format and approach being used to develop the Career Education concept was discussed. Each participant in the workshop received a sample packet along with a brochure describing the priorities in each level. A total of seventy-five teachers were reached through these workshops.

- A model vocational guidance program was developed. See "Special Projects" section of this report for details.

- Traveling workshop for counselors.

  A. A traveling workshop for counselors was conducted. The workshop was designed to provide counselors from throughout the state with the vocational-technical offerings available at the post-secondary institutions in the state. Schools at Bismarck, Williston, Devils Lake, and Wahpeton were visited. The objectives of the program were (1) to acquaint counselors with the various vocational education opportunities at North Dakota's post-secondary vocational-technical schools, (2) to provide counselors with information concerning expectations of future employees and (3) to provide counselors with occupational information they need to meet the vocational guidance needs of their students.

  B. A "Film-of-the-Week" activity was initiated by a junior high school counselor. The basic objective of this activity was to provide students the opportunity to view, on an optional basis, selected audio-visual materials pertaining to a variety of occupational areas. Generally, these films were scheduled during study hall periods, lunch periods and after school hours.

VI. Information Dissemination

A basic goal of the Career Education program was to establish a system of disseminating the materials that were developed to schools throughout the state of North Dakota. The following list is a summary of dissemination activities:

- The project developed and maintained a library of Career Education information and materials both commercial and non-commercial. This served as a clearinghouse for all Career Education information. The materials were available to school personnel and the general public.

- A bibliography of Career Education materials was made available to all schools in the state. School librarians received periodic up-dates of the listing.

- Career Education materials in the ERIC collection were made available in micro-fiche form upon request from the Vocational Education library.

- Hundreds of out-of-state requests were answered regarding information about the project.

- Presentations on Career Education were made before meetings and conferences of such groups as the Department of Elementary Principals, Association of Secondary School Principals, School Administrators Association, State School Boards Associations, State Board of Higher Education, Department of Public Instruction, North Dakota Education Association, local and state PTA, Employment Security, service clubs, teacher-training classes, and general public meetings.

- Numerous presentations were made at out-of-state conferences on North Dakota's Career Education program. Locations include:

  National Conference for Exemplary Project Directors, Columbus, Ohio.
  American Vocational Conference, Chicago, Illinois
  Career Education Conference, Minneapolis, Minnesota
  Career Education Workshop, Northern State College, Aberdeen, South Dakota
  Research Coordinating Unit Regional Conference, Jackson Hole, Wyoming
  Career Education Workshop, Aberdeen School District, Aberdeen, South Dakota
  Career Education Workshop, Ames, Iowa
  Career Education Workshop, Boise, Idaho
  Career Education Workshop, Riverton, Wyoming
  Career Education Workshop, Pikeville, Kentucky

- Numerous newspaper articles on Career Education were published locally and statewide. Feature articles appeared in more than eight issues of the Bismarck Tribune.

- News releases were periodically provided all media including radio and television.

- Contributions were made for articles in such publications as The Instructor, Career Education in the Middle/Junior High School, Career Education News, Career Education Resource Guide, North Dakota Journal of Education, Career Education - A Handbook for Implementation, and Career Education - What It Is and How To Do It.

VII. Governor's Conference on Career Education

As part of the Career Education program, a Governor's Conference on Career Education was held October 2, 1972. The purposes of the Governor's Conference on Career Education was to inform North Dakota citizens of the basic concepts of Career Education, to establish a framework for local program implementation, to stimulate cooperation in local planning for Career Education and to assess the potential of Career Education for improving education pre-school to adulthood.

The Governor's Conference was attended by representatives of civic groups, business and industry, labor, education and professional organizations representing both local and state wide interests throughout North Dakota. More than 450 persons attended the conference.

The following are excerpts of some presentations made at the conference:

"Over the years I have been a member of many conferences having to do with education. This conference is the most interesting conference that I have ever seen scheduled. When we leave here today, I think that you will agree with me that this is a landmark conference in our state of North Dakota.

"North Dakota being the most agricultural of all states probably presents less opportunities for students to observe the many options in the world of work than most other states. As students progress from kindergarten or first grade through high school and even college there are limited opportunities to gain insight into the many career choices available to them. This suggests that we should work harder than other states in providing opportunities for students to examine the various options that exist in the world of work.

"The exemplary program stresses the need to stimulate new ways to bridge the gap between school and work. At first it was difficult for me to determine that there really was a gap between school and work. People go to school and then they get a job but the sad part of it is that there are a large number of students who proceed through school without any goals. They have nothing in mind as to what they want to do some day primarily because no one has taken the time to expose students to the many careers in this country. This places a particular responsibility on the classroom teachers.

"Career Education suggests that career development is every teachers responsibility. Every teacher must teach for the transfer of their subject into the world of work. I wonder how many of us as teachers have conscientiously tried to transfer the

subject that we teach into the world of work. We cannot assume that the students will make the relevant interpretation on their own. Career Education stresses career orientation and information at the elementary level; information, self-evaluation and exploration at the junior high level; and exploration and preparation at the senior high school.

"It seems to me that in our state which has fewer opportunities for students to observe a broad range of occupations in their home communities it is especially important that we create an awareness of careers outside of our community and even outside of our state.

"It is really tragic to see someone that obviously has the talent and the ability but is not putting that talent or ability into full use because they are in the wrong career. Yet we see time after time people in the wrong career and they don't know how they can get out of this rut and they don't know how they got into it in the first place."

-- Governor William L. Guy

"Career Education is not vocational education but it does bridge the gap between vocational education and the so-called academic education or learning. It begins or should begin in kindergarten and extends through the years of elementary grades, high school and on. It lends relevance to all or nearly all school subjects in kindergarten and through the sixth grade. It can be an introduction to the various careers, to the various occupations, avocations, vocations and professions. In the middle grades exploration can be started. This can be done in your school without adding a lot of personnel, without adding a lot of equipment, material and so on. No doubt you can do it and no doubt it has been done. But now, I think it has to be done to a greater degree, to a greater extent. In the junior high and senior high school we should begin to look in depth at the various careers, occupations and professions.

"All during this time, from kindergarten and on, the student should receive guidance and counseling. One particular high school teacher was asked by a neighboring high school teacher, 'What do you do in Career Education?' This high school teacher answered, 'I don't know. Ask the vocational education department. I'm a curriculum man myself.' Well, that is exactly what we should not be; Career Education embraces the whole school program. In a sense, all education is Career Education no matter what one does. English and Mathematics are career subjects as well as T & I and Office Education."

-- Mr. M. F. Peterson, Supt.
State Dept. of Public Instruction

"The main purpose of the new concept of Career Education is to prepare all students for a successful and rewarding life of work. How? By making education more meaningful and more relevant to the students; by giving them a greater and more realistic choice of careers; by increasing training possibilities; and by helping them acquire, transfer and expand their occupational skills.

"We must refocus our needs and our educational facilities to meet the realities of today. And we must do it without downgrading the student who chooses not to go to college. We must provide in the curricula of all levels an opportunity for our youth to make better choices about, and become better prepared for, an occupational career. By making education more relevant to one's life work, we can increase motivation (keep our dropouts in school longer) and improve educational performance.

"Career Education must serve all of our children -- children of all economic, racial, ethnic and social background. It should offer them tangible educational experiences in their early childhood, through grade and high school, in college and beyond, through all of their productive lives. It should focus on the critical decision points at which individuals must be prepared to pursue a job or further education or some combination of both work and formal study."

-- Mr. Duane J. Mattheis, Assoc. Comm.
US Office of Education, Washington, DC

"Career Education has tremendous implication for higher education. Certainly, we have heard the part that Career Education plays in our elementary and secondary schools. If Career Education does take place on all of these levels, we, in college, can expect people with more awareness of their goals and of what they want to achieve. They'll come to us and demand much more. They'll be more critical in their approach to higher education.

"If we're going to have meaningful Career Education it is going to take involvement of each and every one of us. And if we succeed in doing this, our society will continue not only to survive - but to flourish."

-- Dr. Thomas Clifford, President
University of North Dakota

"The business community must become an integral part of the total education system. The community as a whole is going to have to offer itself as an extension of the school classrooms.

If we are going to assist students in making more realistic career choices we must provide them opportunities to observe and participate in a variety of actual work settings. The community can provide that setting."

-- Mr. Richard Crockett
Executive Vice President
Greater North Dakota Association

"Our true education for a career does not just begin at our senior year in high school or freshman year in college -- the education we need for a lifetime career begins when we start playing with toys around the age of three and the act of learning NEVER ends!

"In this day and age students want the chance to be individuals -- we want to have the right to think and act the way we feel necessary. To be an individual we have to know ourself, what we are and what we want to be. We have to be aware of the range of careers -- we have to be aware that nowadays a person has to go into training for <u>any</u> field whether it be a plumber, carpenter, or farmer."

-- Sheila Schumacher
A Student

"There are many reasons why a teacher feels that Career Education should be stressed in the elementary grades. One concept that is most important is to develop positive attitudes toward the world of work, and positive self-awareness for the child's role in a free and changing society. Young children need many experiences to help them understand who they are, their own preferences, and their pattern of learning, to mention a few.

"A variety of experiences can be provided for the children of the elementary grade in Career Education, by integrating this material and the rest of the curriculum that we have. Many of these activities at the primary level are integrated with the social studies. Incidental learning takes place as Career Education games are used on bulletin boards, displayed with tools and items of clothing and also from the World of Work book. All these help to develop the primary objectives we feel are important: (1) to develop positive self-concepts, (2) to develop positive attitudes toward the world of work, (3) to provide general observational experience of the world of work, (4) To present appropriate occupational information about the world of work. Resource people who could be parents of children will come

and discuss their jobs with the class. Parents can be involved with the children as they may accompany the class on field trips to various places. Many parents have commented that they have learned as much as the children on these trips. All this promotes greater involvement between the school and community. We thank the business people who have helped us by providing field trips.

"There is no intent at this level to have children make career choices. Rather, we are using workers as a vehicle to build positive attitudes at this young age when attitudes are being formed."

-- Mrs. Ann Hillesland
Elementary Teacher

"Career Education is a part of the total game we call education. I like to think of it as a mosaic, and no part of the mosaic can be absent without being missed. So it is with Career Education. I feel that it is an important part, an integral part, of what we call education today.

"Career Education is not the total answer to all the problems of education. If we are, however, going to prepare our young people for their future lives, Career Education has to become the responsibility of our educational system.

"Probably the most important aspect of the entire process is its ability to instill in students a mental attitude that will prepare them to cope with change. Certainly, we can't make the decision for them as far as their work is concerned. But it is up to us to help, to guide and to provide them as much information as possible. We must instill in students a mental attitude that will allow them to see the future as it will be and adjust their life style to the future."

-- Mr. Leon Olson, President
North Dakota Association of
School Administrators

E. EVALUATION

Interim Report
July 1, 1972 - August 30, 1973

TEACHER SUMMARY

Throughout the academic year 1972-1973, contacts were made by the "evaluation team" with classroom teachers of the Bismarck Public School System regarding the progress of the Exemplary Project in Career Education. Meetings with the teachers were both individual and group in nature.

The evaluation of the first two years of the Exemplary Project revealed that the elementary grades and to a certain extent the junior high schools made the most headway in implementing and utilizing the Career Education materials. However, the most recent interviews and contacts with the classroom teachers tended to indicate that progress has been made at the senior high school during the past year. These teachers reported a greater willingness by their colleagues to become involved with Career Education. At the same time, the elementary and junior high school teachers have continued to integrate world of work activities into their curricula.

One problem that has been encountered by junior and senior high school teachers is that of duplication of efforts. Because of the nature of their contacts with students, junior and senior high school teachers feel there is excessive overlap in their activities pertaining to the world of work. They recognize that some overlap is needed, but at the same time they feel such duplication fosters a negative attitude on the behalf of students toward Career Education and its associated activities. According to the teachers, what is needed is greater coordination among teachers in the same school building.

Teachers speak very positively about the K-12 classroom activities which were disseminated by the Exemplary Project staff. They felt that the activity books were being used quite extensively. In spite of the fact that teachers indicated that resource materials were effective for presenting the world of work to students, they considered their availability at times to be not so satisfactory.

The teachers indicated that the specific behavioral objectives for the classroom activities have not been used in obtaining a measurable assessment of the learning for each activity. Because of the amount of work required in measuring the outcome of each activity and the amount of resistance that might be created, it might be recommended that (1) specific behavioral objectives be eliminated in future curriculum revisions or (2) use and measurement of specific behavioral objectives by teachers on a voluntary basis.

When implementing the Career Education project in other schools, Bismarck teachers were very emphatic that extreme care be taken to

orient other teachers to the Career Education project. It is most important that such orientation sessions be kept on a practical level. Project staff and others involved in the orientation should be prepared to demonstrate what is expected of teachers.

The reaction of the Bismarck teachers to the Exemplary Project staff was highly favorable. Teachers expressed the feeling that the involvement of the Project staff was a necessity in promoting an awareness of Career Education.

Considering their comments and recommendations, the Bismarck teachers consider the Exemplary Project a worthwhile and successful program. Like with any new program, added incentive and effort is required to encourage and stimulate teachers to continue their involvement in Career Education.

COUNSELOR SUMMARY

The guidance department of the Bismarck system has had a minimal amount of involvement in the total Career Education project. There was initial involvement but this dropped off except in those projects that were actual guidance projects. A factor which contributed to this was the change in personnel during the three years. These changes produced a lack of continuity in the program in terms of guidance personnel contact with the project.

In discussing the Career Education project with the counselors, there were different levels of support and interest ranging from the position that it was a teacher initiated-curriculum project to a position of strong commitment and participation. The majority of the counselors were passively supportive rather than actively involved.

Because the Exemplary Project was seen as a program with a heavy guidance emphasis it is probable that the counseling staff felt resistance to a "second" guidance program being implemented in the school system.

The role of the guidance personnel needs to be more clearly stated. This should reduce confusion and increase active involvement. What is seen as lack of enthusiastic support may be a lack of understanding of the role and function of the guidance personnel in Career Education.

ADMINISTRATOR SUMMARY

During the past fiscal year, the "evaluation team" met twice with the Bismarck Public School Administrators. The first meeting was on December 9, 1972 and the second, May 18, 1973.

At the time of the first meeting, the general impression of the evaluators was that while all of those administrators in attendance expressed a positive attitude toward Career Education and the exemplary staff and its activities, the degree of positiveness varied widely. In addition, the administrators indicated that they were not planning on taking any aggressive, positive action to facilitate the implementation of the Career Education concept into the curriculum.

However, at the time of the second meeting, the evaluators noticed a more positive attitude toward Career Education by Bismarck school administrators. Comments regarding the exemplary project were highly favorable. A summary of selected comments follows:

1. Senior High School teachers have become increasingly involved in Career Education activities.

2. Teachers are looking forward to expanding their involvement in Career Education.

3. The project staff have been most helpful and their low-key approval was most effective.

4. The money set aside for the Exemplary Project was money well spent.

5. As their involvement in Career Education increases, teachers do not see it as a burden but instead view it as a very integral segment of their classroom instruction.

6. People from the community have become more involved in Career Education and have enjoyed participating in world of work activities. In addition, resource people within the community are anticipating continued involvement in Career Education.

Whereas in December, 1972, the administrators were reluctant to give total support to Career Education, the present feeling of these same administrators is that what teachers are doing now regarding Career Education will continue next year. They also recognized the fact that if principals in the various schools were not supportive of Career Education, the teachers would tend to lose their willingness to make education more relevant for students. This attitude represents a great change from that of December, 1972, when the administrators felt that the driving force behind Career Education was teacher enthusiasm.

To exemplify their support of Career Education, the assistant superintendent recommended the formation of a committee which would meet regularly for the purpose of exploring avenues for promoting Career Education in the Bismarck Public School System. It was felt that this committee should have a membership of both teachers and administrators.

STUDENT SUMMARY

Approximately 100 copies of a brief questionnaire were left in the senior high school library and career information center. This sample would probably represent the group of students who would respond most favorably to the questionnaire. No attempt was made to identify grade level or sex. Rather, the survey was a spot check of student awareness of the Exemplary Project and the related activities. A brief explanation accompanied the questionnaire.

Question 1 Were you aware of the Career Education Program?
Yes 63 (64%) No 35 (36%)

Question 2 Did most of your teachers include this type of activity in their teaching?
Yes 18 (20%) No 79 (80%)

Question 3 If you had classes where this was done, was it a worthwhile experience?
Yes 38 (53%) No 34 (47%)

Question 4 Would you like to see more teachers use this approach?
Yes 82 (85%) No 14 (15%)

Question 5 Can you name one classroom activity that you thought was especially helpful?
Yes 33 (36%) No 59 (64%)

From the results of the questionnaire it may be concluded that a good percentage of students were aware of the program in Career Education but that they felt a majority of teachers were not utilizing the program activities in their classroom. They also were evenly divided as to the value of the experiences that they had had but still felt that more teachers should use this approach. This would suggest a basic positive student attitude toward the type of activity associated with Career Education, even in the developmental stages of the materials.

A thorough study of student attitudes should be conducted to identify a more representative picture. This data should be of assistance in encouraging teachers to utilize the Career Education material, if the data follows the pattern of this limited survey.

PARENT SUMMARY

To evaluate parental knowledge of and attitude toward the Exemplary Project-Career Education emphasis in the Bismarck School System eighteen classrooms were randomly selected from all levels to participate in the study. This resulted in eleven (11) elementary, four (4)

junior high school, and three (3) senior high school classrooms being selected. The basic questions being considered were, (1) what is the general knowledge of and attitude toward the Career Education Project and (2) were there any differences among the three levels of school.

The total number of questionnaires distributed to the students to take home to their parents was approximately 600. The number given to the elementary students was approximately 360 and to the secondary students, 240. The total returns numbered 88 or 15 percent. This is extremely low and difficult to generalize from. The secondary level students returned 17 questionnaires and the elementary students returned 71 questionnaires. This fact in itself suggests a lack of interest in the project, although it is difficult to say whether the students failed to bring the questionnaires to their parents or the parents did not return them to the school.

Based on the limited data found in the following table the following tentative conclusions are made. The N's differ because of omitted responses.

TABLE OF PARENT RESPONSES

Table 2

QUESTION	1-6 YES	1-6 NO	1-6 N	7-12 YES	7-12 NO	7-12 N
1. Were you aware of the Career Education emphasis in the schools?	43%	57%	71	41%	59%	17
2a. Has your son or daughter discussed with you any school experiences which are related to the world of work?	41%	59%	71	70%	30%	10
2b. If yes, would you judge these experiences as being helpful in understanding the world of work?	97%	3%	32	100%	0%	7
3. Have you read in the paper or seen on T.V. anything that was related to this program?	30%	70%	70	35%	65%	17
4. Do you feel the school should provide this type of activity for your child?	96%	4%	71	100%	0%	16

1. The majority of parents were not well informed of the specific program.
2. Parents who were not aware of the Career Education project had discussed things with their children that they felt were career oriented.
3. Those who had discussed school experiences with their children were overwhelmingly supportive of that type of activity.
4. Parents who were informed and those who were not informed felt that the schools should provide career education activities for their child.

Although the return of the questionnaires was limited there is enough evidence to support the involvement of parents in the Career Education movement. A concrete, well defined approach should be developed that would insure parent involvement. It cannot be left to incidental or advertising exposure, or left to student parent discussions that are not planned.

An attempt was made to conduct an interview with a group of parents by the evaluation team. The Exemplary Staff arranged for this group to meet in the evening with the visiting team. Though a number of parents did indicate a willingness to come, none in fact did. Future face-to-face interviews should be conducted in the school, possibly at the time of parent teacher conferences.

BUSINESS COMMUNITY PARTICIPATION

In the original planning for Career Education, the involvement of the business industrial community has been repeatedly stressed. This is to manifest itself in classroom speakers and demonstrators from the world of work, tours of business and industry and student involvement with the men and machines of the work world.

The Bismarck project has stressed this phase of Career Education from the projects inception. This year the project contained the services of a community resource coordinator. Mr. John Wanser handled this responsibility as he has in prior years. In the opinion of the evaluators it is essential that some one person in a school system assume this responsibility. The coordinator can be expected to accomplish the following:

(a) Develop a list of community resources.

(b) Coordinate utilization of these contributors to provide orderliness and prevent abuse of hospitality.

(c) Brief the community resources as to their role in the Career Education process.

(d) Act as liaison between the school and the community resources.

In order to determine the status of the community resource program, the evaluators met several times with Mr. Wanser and once with a selected cadre of community resource persons.

It is the opinion of the evaluators that the prior two years have set the background for a workable community resource program.

The attitude of the resource persons interviewed by the evaluators was highly positive. Conclusions drawn from the meeting with resource

persons and Mr. Wanser are as follows:

(a) The current program of contacting resources during the summer and setting up utilization schedules is successful.

(b) The business and industry personnel contacted look favorably upon the Career Education program.

(c) There is no indication that the resource personnel are in any way hesitant about the program or resent whatever costs they incur.

MATERIAL EVALUATION

The third year of the program provided an opportunity to survey what had been accomplished and consider some revisions in approaches.

In this year with the maturity of two years of experience the following points were considered by the Exemplary staff and evaluators.

(a) It is apparent that emphasis on formalized lesson planning, particularly accenting behavioral objectives and evaluation, cause considerable apprehension for many teachers.

(b) It is quite apparent that a formalized lesson by lesson evaluation program will not be voluntarily adopted by the majority of the teachers.

(c) When model lesson plan booklets are introduced to new teachers in the future, time must be allowed to adequately prepare the teachers for the formalized plans.

(d) Possibly lesson plans in the hand are less important in introducing Career Education than is a well planned and adequate workshop.

STUDENT ATTITUDE CHANGE TOWARD THE WORLD OF WORK

To determine if the attitudes of students could be changed in the period of a year, the following study was conducted in the West Fargo school system. This school system cooperated with the Department of Vocational Education in developing career materials, conducting local workshops, and participating in an educational program in conjunction with North Dakota State University. The rationale for the study was that with the marked increase in faculty involvement in Career Education activities, student attitudes might be expected to change.

Grades 5-6

In September 1972 a twelve item questionnaire was administered to

several classrooms. The same questionnaire was readministered in May, 1973. The following tables present the data for males and females by grade independently.

From the tables it can be seen that the attitudes of the students were quite stable. It would be difficult to expect a significant shift in the interest in entering and knowledge about the occupations unless they were specifically covered in the classroom. It would be more reasonable to expect a positive shift in the attitudes about the importance of occupations to the country. This did not happen.

Although no shifts in attitudes were found it is interesting to note the recognition of social status as it relates to the importance of an occupation. This would suggest that positive and negative attitudes about occupations are formulated relatively early in a child's development. This would suggest that attitude development relating to the world of work needs to begin in the early grades.

MALE OCCUPATIONAL ATTITUDE SURVEY RESULTS
GRADES 5-6 PRE POST MEAN SCORES

Table 3

	Grade 5 N=39						Grade 6 N=46					
	Importance to country		Interest in entering		Knowledge of		Importance to country		Interest in entering		Knowledge of	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Minister or Priest	4.2	4.2	2.6	2.3	2.6	2.3	3.8	3.7	2.0	2.0	2.5	2.4
Plumber	3.1	3.5	2.1	2.3	2.2	2.5	3.2	3.4	2.0	2.4	2.0	2.5
Electrician	4.2	4.2	3.3	3.1	2.5	2.4	4.4	4.3	3.3	3.4	2.1	2.2
Airplance Pilot	4.2	4.1	3.4	3.4	2.5	2.6	4.0	3.9	3.7	3.6	2.4	2.2
Restaurant Waiter	2.4	2.6	1.9	1.4	2.8	3.1	2.6	2.8	1.9	1.7	2.7	3.4
Lawyer	4.1	4.4	2.8	3.2	2.1	2.1	4.0	4.0	2.8	3.1	1.8	2.2
Medical Doctor	5.0	4.9	3.6	3.9	2.3	2.2	4.8	4.6	3.0	3.1	1.8	2.3
Railroad Engineer	3.8	3.8	2.5	2.9	2.3	2.4	3.5	3.7	2.9	2.8	2.3	2.3
Teacher	4.0	4.0	2.6	2.3	2.6	3.0	3.5	3.9	1.8	1.8	2.5	3.1
Radio Announcer	3.7	3.3	2.3	2.6	2.5	2.7	3.6	3.4	3.0	3.1	2.6	3.2
Mailman	4.1	3.9	2.6	2.3	3.5	3.1	4.0	4.0	2.7	2.4	3.2	3.5
Truck Driver	3.7	3.7	3.6	3.5	3.6	3.9	3.4	3.3	3.1	3.1	3.4	3.5

FEMALE OCCUPATIONAL ATTITUDE SURVEY RESULTS
GRADES 5-6 PRE POST MEAN SCORES

Table 4

	Grade 5 N=39						Grade 6 N=46					
	Importance to country		Interest in entering		Knowledge of		Importance to country		Interest in entering		Knowledge of	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Social Worker	4.2	4.3	2.6	2.9	2.3	2.2	4.5	4.6	2.9	2.9	2.0	2.6
Secretary	3.6	3.4	3.6	3.3	3.2	3.4	3.4	3.4	3.5	3.4	2.9	3.2
Nurse	4.9	4.8	3.7	3.8	2.6	3.0	4.9	4.9	3.4	3.3	2.9	3.2
Stewardess	3.3	3.6	3.7	3.4	3.0	3.2	3.5	3.5	3.4	3.2	2.9	2.7
Waitress	3.0	2.9	3.5	2.9	3.7	3.6	3.0	2.8	3.1	3.1	3.7	3.7
Lawyer	4.4	4.7	2.4	2.6	1.7	2.1	4.6	4.6	2.6	2.5	2.0	1.9
Medical Doctor	5.0	4.8	3.7	3.7	2.3	2.4	5.0	4.9	2.9	2.9	2.0	2.3
Beautician	2.1	2.1	3.1	2.3	3.0	3.0	2.5	2.3	2.9	2.7	2.0	3.0
Teacher	4.8	4.8	4.0	3.6	3.4	3.7	4.7	4.7	3.8	3.3	3.7	3.6
Radio Announcer	3.8	3.5	2.1	1.9	2.2	2.1	4.0	3.9	2.3	1.9	2.3	2.1
Cleaning Lady	2.4	2.7	1.8	1.8	3.8	3.8	2.7	2.6	1.8	1.7	4.1	3.9
Sales Clerk	3.3	3.3	3.2	3.4	3.3	3.4	3.4	3.5	3.4	3.4	3.3	3.5

Grades 7-12

One hundred and fifty-two secondary school students in the West Fargo school system responded to a forty-eight question inventory which measures maturity of attitudes regarding careers. A pretest was administered in September and was followed by a post test at the close of the school year. The results for grades 7-12 have been summarized and presented in Table 5.

For both the pretest and post test, the mean and standard deviation were calculated for each grade and for all grades combined. In addition, a "Related T Test" was used to test for any significant differences between the prctest and post test means for each grade and for the combined group.

With the exception of grade seven, the means for all grades increased from the first to the second administration of the inventory. However, only for grades eight and nine and for the combined group was the increase significant. Apparently, students in grades eight and nine are evidencing a positive movement in the career planning process. The significant difference for the combined group was influenced by grade eight and nine differences.

In addition, the mean attitude level for the six grades increased progressively on the pre and post test from grade seven through grade twelve. Since career awareness and attitudes are based upon maturity, this progression would be expected to occur.

MEANS, STANDARD DEVIATIONS, AND T VALUES
FOR GRADES 7-12 ATTITUDE SURVEY

Table 5

Grade	N	Pretest Mean	Post Test Mean	Pretest Standard Deviation	Post Test Standard Deviation	T
7	25	27.76	26.60	5.06	6.02	1.104
8	19	30.21	31.95	4.82	4.17	-2.541*
9	24	30.79	32.80	4.87	5.42	-2.687*
10	24	32.21	33.33	4.28	5.50	-1.059
11	35	33.31	34.49	4.51	3.44	-1.676
12	25	34.28	34.88	3.75	5.54	-0.766
7-12	152	31.60	32.49	4.98	5.68	-2.587*

*Significant at .05 level

EVALUATION OF INCREASE IN GUIDANCE SERVICES

During the 1972-1973 school year the Exemplary Project goals were further realized with the expanded guidance services and career education activities.

In this period the number of students receiving guidance services was increased significantly. This definitely meets one of the objectives of the project.

Secondly, the number of minority group members receiving services as a direct result of the Exemplary Project was increased from 318 in 1971-1972 to 683 during the past year. This again is an accomplishment of a stated goal on the part of the Exemplary Project. These students were from the handicapped special education student group and the American Indian population.

FINAL REPORT
July 1, 1970 - August 30, 1973

INTRODUCTION

The three year evaluation has changed in its complexion since the first evaluation visit. The major change has been from a product evaluation to a process evaluation with minimum concentration on product evaluation. This has been a meaningful change although it is more difficult to cite data to substantiate the achievement of the project goals.

The shift away from the product goals to a process evaluation came about because of the following reasons.

1. Lack of valid instruments to measure the changes (attitude and knowledge) proposed by the Project rationale.

2. Difficulty in measuring such factors as self-concept, feeling of self-adequacy, positive attitude toward the World of Work, etc.

3. The overall rejection of the classroom teacher in using behavioral objectives with the accompanying pre-post testing.

4. The experimental quality of the lesson materials resulted in an emphasis on the refinement of the materials making it difficult to assess the effect of using the materials.

The shift to the process evaluation has been beneficial for the following reasons.

1. Teacher disinterest in constantly gathering data for an "outside" project.

2. The sense of personal interest conveyed by visiting and observing rather than collecting data.

3. The use of observation as a technique for making judgements on variables difficult to quantify.

4. The change for immediate feedback to the Exemplary staff regarding project problems.

5. The opportunity for the evaluation team to assist the project staff in its relationship with the Bismarck School System.

The following report is basically a Process Evaluation report. Some consideration is given to Product Evaluation.

EXEMPLARY PROJECT ACCOMPLISHMENTS

During the time span of the Bismarck, North Dakota Exemplary Project from 1970 to 1973 it is apparent that an on-going structured undertaking has progressed.

In late 1970 the staff concern was:

(a) Dissemination of information regarding the Career Education concept.

(b) Gathering, in lesson plan form, learning activities relative to the World of Work.

After many meetings and many workshops the bulky compilation of lesson plans was printed in September, 1971. There were obvious objections to this first volume.

(a) Too bulky

(b) Incomplete

(c) Not sufficiently imaginative

Characteristic of the on-going process that has permeated the Exemplary Project, the staff and the evaluators were among the first to recognize the shortcomings of the Guidelines of Career Development Activities.

In an effort to minimize criticism and maximize usage, the guideline was reviewed, revised and republished in a substantially improved form in September of 1972. The new package stressed "sample lesson plans" rather than completed programs. This offering was much more kindly received by North Dakota teachers.

By this time it was also becoming apparent to the evaluators and the Exemplary staff that inservice teachers did not readily accept stylized and structured lesson planning. Apparently the term "behavioral objectives" and "evaluation" both are skeptically perceived by many North Dakota teachers. It particularly became evident that if the staff were to sponsor a program that rigidly required evaluation of each learning segment that the acceptance of the program would be jeopardized.

The consensus of opinion of the project staff and the evaluators was that it might be wisest to talk about Career Education in terms of formalized lesson plans but that the structured aspect of the lesson planning should be de-emphasized in order to minimize rejection of the total concept due to heavy accent on lesson plan structure.

Two very practical and well received project publications helped in the process of "selling" the total concept and aided in lesson planning.

The brochure Career Development K-12 was very well done and provided a structure for the inservice teachers to develop their own lessons around.

The second very useful publication was entitled Free Loan Career Education Resource Materials dated September 1972.

While lesson planning and concept dissemination occupied the majority of the time of the project staff, other activities aided materially in the furtherance of the Career Education program in North Dakota. Three staff efforts should be commented on here as contributory to the improving state wide program acceptance which became apparent in 1972 and 1973.

(a) The staff made it a point to be available at the beck and call of any school system that wanted advice and assistance. The evaluators, in checking with school personnel subsequent to Exemplary staff visits, usually found very positive responses to the staff visit. This is in part due to the attitude of and evident competence of the staff. In other words, staff competence tended to sell the program probably as much or more than the concept itself.

(b) At the Bismarck office a readily available library of Career Education resource materials gave state teachers welcome assistance in lesson planning.

(c) The summer exploratory program conducted in association with Wahpeton State School of Science proved to be a successful project and a good public relations vehicle.

In late 1972 and early 1973 the concentration of staff attention has been on:

(a) Developing an on-going Bismarck program to continue after the Exemplary project terminates. (The evaluation staff has been assured by the Bismarck school administration that Career Education will be continued.)

(b) The development of the special Bismarck Vocational Guidance Project. (To be reported on separately.)

(c) The state wide dissemination of Career Education information and expertise. This has been accomplished by numerous staff school visits throughout the state but more specifically by a

series of ten statewide workshops currently in progress.

This is a fortunate point in time for the Bismarck project to be drawing to a close. By and large the objectives have been met and the goals accomplished. It is very possible that further time spent in Bismarck system might not be as productive as has the time to date. A new location can afford a new perspective incorporating the gains made in Bismarck during the last three years but also, fortunately, leaving behind some of the mistakes and less fortunate undertakings.

COMMITTEE SUMMARY

During the first year (1970-71) of the Exemplary Project committee members responded to four questions regarding the project and committee system. Three years later (1972-73), remaining committee members responded to the same four questions. The results of the two administrations have been presented in Table 6. The paragraphs which follow summarize the results for each of the four questions.

1. BASED ON YOUR KNOWLEDGE OF THE EXEMPLARY PROJECT WHAT IS YOUR OVERALL ATTITUDE AT THIS TIME?

   For each of the four committee groups, there was attitude improvement toward the Exemplary Project. Attitude differences among the four committees on the initial administration still existed on the final administration. For both administrations, the committee members for the lower grades possessed a more favorable attitude toward the Project than did committee members of upper grades.

2. IN TALKING TO YOUR FELLOW TEACHERS WHAT DO YOU FEEL IS THE GENERAL ATTITUDE TOWARD THE PROJECT?

   In all but one committee group (7-9), attitude improvement was noted for teachers. However, the results for this committee might not be considered representative since there was only one respondent on the final administration. Of particular importance is the observation that the K-3 and the 10-12 committee members felt that the teachers' attitudes toward the project was much improved.

3. WHAT IS YOUR REACTION TO THE HELP GIVEN TO THE COMMITTEE BY THE EXEMPLARY STAFF?

   All but one committee group (4-6) felt that assistance from the project staff had improved over the three year period. For that group, the attitude was nearly stable, decreasing only slightly. As perceived by committee members, assistance at the secondary level was much improved.

4. WHAT IS YOUR ATTITUDE REGARDING THE EFFECTIVENESS OF THE PRESENT COMMITTEE APPROACH IN ACCOMPLISHING THE PROJECT'S OBJECTIVES?

Three of the four committee groups demonstrated an improved attitude toward the committee approach over the three-year period. The attitude of the K-3 group regarding the committee approach decreased slightly.

On all four questions, committee members presented a favorable reaction. Based upon their responses, attitudes of teachers and committee members toward the Exemplary Project have improved over the three-year period. Likewise, committee members appeared to value the assistance of the Project staff. In addition, the committee approach was viewed as a suitable vehicle for accomplishing Project objectives.

STAFF EVALUATION

The Bismarck Project has received frequent favorable mention from authors and parties interested in Career Education across the nation. It is apparent to the evaluators that this success and or acclaim in large measure is due to the competency of the Exemplary staff. The Bismarck design is not particularly unique or noteworthy but what has been done with this design is. Several characteristics of the staff which have contributed to the success of the Bismarck Project should be recognized because these characteristics and/or task approaches should be encouraged in future projects.

(1) The Exemplary staff is both publicity conscious and public relations minded. This has greatly facilitated concept dissemination and acceptance.

(2) The staff has evidenced a willingness to work rather than consult or advise. This shirt-sleeve approach aids in winning funds for the project and speeds implementation.

(3) The staff is competent within their areas of competence. The evaluators were frequently told just this by teachers and administrators of the Bismarck system. Career Education has progressed more satisfactorily at the elementary and junior high levels in Bismarck. At first it was the evaluators' opinion that this was due to differential staff competency. In particularly investigating this, the evaluators found (to their surprise) the staff was looked upon just as favorably at the senior high level as at the lower levels. It then is concluded that this difference in implementation from elementary to senior high is due to factors other than staff acceptance and competency.

(4) One area which deserves mention because its continuation is strongly recommended is the fact that the project leadership

FIRST YEAR (1970-71) AND THIRD YEAR (1972-73)

MEANS FOR THE FOUR EXEMPLARY PROJECT COMMITTEES

ON SELECTED ATTITUDINAL QUESTIONS

Table 6

Attitudinal Question	Committees							
	K-3		4-6		7-9		10-12	
Year Administered and Sample Size (N)	1970-71 N=7	1972-73 N=5	1970-71 N=32	1972-73 N=6	K70-71 N=22	1972-73 N=1	1970-71 N=10	1972-73 N=3
Committee member attitude toward Exemplary Project	1.43	1.20	1.62	1.50	2.32	2.00	2.70	2.33
Teacher attitude toward Exemplary Project (as expressed by committee members)	2.57	1.80	2.50	2.33	3.14	4.00	3.80	2.66
Reaction to help given committees by Exemplary Project Staff	1.43	1.00	1.25	1.33	2.43	1.00	3.30	2.33
Attitude regarding the effectiveness of the committee approach	1.71	1.80	1.75	1.66	2.50	2.00	3.40	2.66

Key:
1= Very favorable
2= Favorable
3= Moderately favorable
4= Unfavorable
5= Very unfavorable

evidenced both aggressiveness in leadership and innovation in accomplishment. It is this type of leadership that the evaluators feel has taken the Bismarck Career Education Project out of the ranks of just another educational innovation.

(5) In regard to leadership aggressiveness, the evaluators feel that in the future the anticipated commitment of the participating school administration should be more firmly and accurately spelled out. In the opinion of the evaluators, if this had been done in Bismarck the process of implementation would have been aided.

TEACHER SUMMARY

Throughout the three years of the project, interviews were conducted by the evaluation team with teachers individually and in groups. Initially, teachers reacted both positively or negatively to the Career Education concept. According to their perceptives, many teachers felt that teaching the "world of work" was an additional burden to their present teaching load.

During the second year, teachers started using the "world of work" materials. However, resistance was still encountered to the integration of career-related activities into the curricula. During the third year more activities were made available to teachers. Accompanying the increased number of activities was a greater receptivity on the behalf of the teachers to Career Education. Consequently, more and more teachers have begun to include career awareness activities in their classroom instruction.

To capitalize upon the improved teacher attitudes toward Career Education, every effort should be made to maintain teacher enthusiasm. Assistance and consultation should be made available to the Bismarck school system in order that progress be continued.

COUNSELOR SUMMARY

The evaluation of the guidance counselors' participation in the project was based on on-site visits to the schools and interviews with all counselors in the Bismarck secondary school system.

The basic attitude of the guidance staff during the third year was basically one of passive support. There was no evidence on their part suggesting that the guidance personnel should take any leadership in the project except for one individual. This counselor expired toward the end of the school year.

The counselors appeared to see themselves on the periphery of the project. This was not due to lack of encouragement by the Exemplary staff, but rather a matter of choice by the Bismarck guidance staff. It appears that the guidance staff saw the project as basically a curriculum oriented project, an area in which they apparently have minimal input as far as planning and development goes.

The fact that the Bismarck school system has no elementary guidance program created a void for the guidance personnel at that level. It was difficult for them to enter the project at the 7th grade which, as a staff, was their first formal contact with the project.

As the project is expanded into other communities and continues to expand in the Bismarck School System it will be important to assist the guidance staff in defining their role and contributions to the area of Career Education. The Exemplary staff and the State vocational guidance director should take a relatively aggressive stand on this matter.

The following recommendations are made based on the three year evaluation for consideration in future projects in Career Education.

1. Provide materials about and promote discussion of the role of the counselor in Career Education by the guidance personnel of the system. Allow the administration and teaching staff to be familiarized with the discussions. This should be an on-going process.

2. With the typical absence of elementary guidance, anticipate the lack of contact that guidance personnel will have with this level and provide for that contact to insure its being realized.

3. Appoint one of the guidance personnel as the liaison person for that group. That individual would provide a channel that information could flow through from Exemplary staff to guidance personnel and also from the various "groups" in the school system to the guidance personnel.

4. Encourage guidance personnel to become involved in curriculum development and, if possible, actually participating in the teaching of Career Education materials in selected classrooms. This would be of signifcant help to the teaching staff.

ADMINISTRATOR SUMMARY

As part of the proposal for the Exemplary Project, the Bismarck School administration pledged the support of the entire school system in implementing the Project. At that time and during the initial stages of the Project, this support was primarily verbal

thus permitting Project staff access to counselors and classroom teachers. Such support was needed and appreciated.

However, during the first two years of the Project, very little administrative direction was given regarding program continuance. As late as December, 1972, the school administration was reluctant to ledge its financial support to the Career Education concept.

By the end of the 1972-73 school year, the administration had become more open in their support of Career Education and the Exemplary Project. The consensus of opinion of the administration was that in order for the Project to continue it must have the support and cooperation of the principals at all levels, elementary and secondary.

In addition, the administration has recommended the formation of a committee to provide for program continuance. This committee will have membership consisting of teachers, counselors, and administrators. Also, the administration has provided financial support during the summer 1973 for one teacher to arrange tours and contacts with businesses during the 1973-74 school year.

In summary, the attitude of the administration has improved immensely. The Career Education concept appears to have the support of the Bismarck school administration. However, to supplement such vocal and overt support, the Project staff would do well to continue to provide consultative assistance to the Bismarck School System.

STUDENT SUMMARY

The overall evaluation of students was conducted on an interview basis, classroom visitation, and the final questionnaire.

Over the three year period it can be concluded that there has been an increased awareness of the effort of Career Education Project. The level of student awareness is still limited, however. This is a result of the teaching staff's lack of use of the materials in the classroom. When the material was used, or projects conducted, the students were aware of the effort and responded favorably.

In interviewing students at the secondary level it was observed that few of them were able to identify the Exemplary Project or Career Education. This was the case for those who had participated in activity that was obviously Career Education oriented. This is appropriate to the extent that it is a concept that is integrated into the curriculum rather than having an independent visibility apart from other classroom material and activity. However, in the future it would seem appropriate to alert the student body (secondary level) that the system is developing a philosophy that

will result in many teachers using materials that will be helpful to the students as they progress toward career planning and choice. This could result in the creation of a frame of reference for students that would give the activities more career relevancy without the teachers having to say it.

Based on the questionnaire results reported in the Third Year Evaluation, students are receptive to activities that have a practical flavor. This interest should be capitalized on in creating the "career" climate in the schools.

The success of the Exemplary Project at the elementary level speaks for the way students respond. Observation of students engaged in activities give ample support to the project at that level.

PARENT SUMMARY

One of the weaknesses of the three year project appears to be the lack of contact of a specific nature with parents. This can be partly explained on the basis that the number of students involved in the project activities during the first two years was somewhat limited. Also, the fact that the materials were in the process of development made it difficult as far as showing concrete evidence or information about the program. However, in retrospect, it appears that greater contact should have been made with parents that would have resulted in greater visibility of the program. This contact should be planned, educational and informative. Parents are supportive of this approach to education. Their involvement will insure greater acceptance by the school system.

The use of television and the newspaper was good but not adequate. A more direct approach needed to be taken. This situation is traceable to the feeling on the part of the school personnel that it was a program being conducted by outside personnel. There was no visible leadership among the school personnel responsible for public relations. The Exemplary staff would have obvious difficulty promoting a program that should have been seen as a local school program regardless of the source of funding. It would seem that the apparent weakness of public awareness is due to the school system not promoting the program as one of their own.

COMMUNITY RESOURCE EVALUATION

The third year report under the heading "Business Community Participation" is in itself a summary of activities in this area. It is axiomatic that if Career Education as a total concept is to be implemmented this, then, demands an active interrelationship between the school and the community. This relationship did develop and is an

on-going process in Bismarck. Evidence of this is included in the third year report where it is pointed out that a meeting arranged by Mr. Wanser between the evaluators and representatives of the business community left the evaluators with a very favorable impression of the attitude of the Bismarck business community toward Career Education.

It is well to remember that whereas in some state projects the community-school relationship was allowed to evolve naturally as Career Education evolved, this was not the case in North Dakota. The evaluators strongly feel that school-business interrelationships need guidance, organization, coordination and direction. Mr. Wanser provided this service for the Bismarck project and very probably much of the success of the school community relationship was due to the fact that the Bismarck project did provide organized direction to this phase of the project. Evidence of the success of this relationship is as follows:

(a) The Bismarck school system has a list of community resources available to teachers of all grade levels. This list provides for speakers, class visitors, and class trips.

(b) In most cases teachers turn into the central office their request for community services and these are coordinated for them by the Bismarck community relations coordinator.

(c) By the very positive attitude expressed to the evaluators by selected members of the business community.

(d) Corroboration of the above impression by members and officers of the Bismarck Chamber of Commerce.

EVALUATION OF THE INTENSIVE TRAINING PROGRAM

Bismarck Junior College Program

In 1971, three programs were undertaken as follows:

Title	Enrollment	% Placement
Nurses Aid	14	65
Typist	12	25
Cashier	10	35
1972 Program:		
Nurses Aid	14	70

Title	Enrollment	% Placement
1973 Program:	No Program	

This program was moderately successful. The director, Mr. Ed Bollinger, was disappointed in placement results and in part, this accounts for the phaseout at this location. Mr. Bollinger, although concerned about low placement precentages, would like to see the program continued. The evaluators concur with the phaseout decision that has been made with the suggestion that if funds do become available, Bismarck should be reconsidered. The re-establishment of the program should take into consideration the placement commitment of potential employers.

Dickinson Program

This assistance to the handicapped program coordinated through the Dickinson School System attempted to:

(a) Acquaint the handicapped with career opportunities and appropriate work attitudes.

(b) Expose the handicapped to the world of work and develop job sites.

This is an admittedly difficult job. However, it appears as if Mr. Renner did develop a program that has become well accepted by the community.

The evaluators feel that possibly too many students were assigned to this program for the funds and staff available. When working with students of this type, a lower pupil-teacher ratio is automatic.

The evaluators would also like to point out that in a program such as this, all of the results are not tangible such as:

(a) The improved class atmosphere in the classroom from which the disadvantages have been temporarily removed.

(b) The improved self-concept developed in the disadvantaged as a result of the less challenges and more personal attention.

If funds are available, Dickinson should assist in the continuation of this project.

Devils Lake Program

The director, Jim Hunt, is an enthusiastic advocate of the intensive training project.

Title	Enrollment	% Placement
1971 Program:		
Service Station Attendant	10	40
Nurses Aid	10	100
1972 Program:		
Nurses Aid	10	100
1973 Program:		
Clerk Cashier	10	100
Nurses Aid	10	100

The director is enthusiastic about the program, feels there is a continuing need for this type of training, and feels it should be an on-going project. The evaluators concur in the director's appraisal.

SUMMER VOCATIONAL ORIENTATION PROJECT

One of the bright spots of the three-year Bismarck Exemplary Project, has been the summer orientation program worked out in conjunction with the Wahpeton State School of Science. This project has met with universal praise from the participants, the counselors of the state, and those educators who are familiar with it. As an example of its popularity, recently North Dakota State University, in conjunction with the National Alliance of Business, ran a Career Guidance Workshop. Speakers were brought in from around the country. Of all the facets of this workshop, the teachers rated the one experience they most appreciated was the slide presentation by the State School of Science on the summer orientation program.

In the opinion of the evaluators, the Exemplary staff is right in seeking ways to reduce the cost of this summer program. It is strongly recommended, however, that the staff devote continuing attention to this project with the intention of developing some means to make this an on-going experience for North Dakota youth.

SUMMARY

In summary, the evaluation team has evaluted the Exemplary Project during the 1970-73 year as agreed upon in the signed contracts. The third year has been the most successful, especially in the willingness of the Bismarck School System Administration to assume responsibility for continuance of the program. This accomplishment was of utmost importance to insure that the program be continued.

The ground work done in the development of the materials should provide a good basis to begin other programs in the state. The materials will be of significant value to teachers throughout the state.

Even though the Exemplary Project turned into a less than statewide project and might be characterized as a "pilot program" it can be said that the overall goal of exposing students to the world of work was accomplished. The initial statewide proposal was excessively ambitious. Hindsight shows that the program that did evolve was without question the best approach. In the implementation of a concept such as Career Education with all its implications for education and educators, a slow, orderly, and well devised approach is a necessity. It is the evaluation teams' judgement that this had indeed happened. The project must be judged a success.

F. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions are based upon the project activities the past three years. They are arrived at through observations, personal visitations, analysis of data from students and teachers, review of the literature on Career Education and active involvement in the development and implementation of Career Education concepts.

- The career development process has been given less than adequate attention throughout the school curriculum.

- Career Education can be integrated into all basic subject matter areas.

- Career development must be recognized as a developmental process and should receive emphasis equal to the other basic educational processes.

- Preservice teacher preparation programs have not adequately prepared teachers to integrate career development activities into their teaching.

- Students need a wide range of activities which offer ways of relating self-concept to various occupational roles.

- There is a lack of occupational role models which suggests that children must be provided opportunities to come in contact with a variety of workers in the classroom and through on-the-job experiences.

- Career development activities should include goal setting and value clarification.

- Parents must become more understanding of the career development process in order to assist their children in career decisions.

- The counseling program should serve as the central core of a career education program. The counselor must become increasingly involved in the placement process.

- Decision-making is a learnable skill and should be reflected in the curriculum.

- A broad range of exploratory experiences must be provided at the junior high level.

- Vocational education must be a strong component of a Career Education program at the senior high, post secondary and adult levels.

- Career Education is a responsibility of the home, school and community.

- The Career Education concept is generally well accepted by educators.

- The business community must become extensions of our classrooms to provide students observational and actual work experiences.

- The state wide leadership for Career Education must be a cooperative effort of all educational agencies.

- Thorough inservice activity must preclude any efforts in implementing Career Education programs.

The implications for Career Education in making schools more responsive to the career development needs of all students are well founded. The students are demanding relevance in their curriculum and Career Education has the potential of being that vehicle. This will require increased efforts at the local, state, and national levels. With this in mind the project makes the following recommendations:

- Funding must be made available at the state level to provide staff for leadership and coordination activities.

- State and federal funds must be made available to assist local schools in implementing Career Education.

- Inservice programs must be made available to local schools for staff orientation and developmental activities.

- The local schools must develop a relationship with the business community that will provide observational and actual work experiences for all students. The classroom must go into the community and the community must come into the classroom.

- The curriculum must reflect an emphasis on career development.

- Career Education must not be sold as a panacea but rather as a practical approach to bringing relevance to the curriculum and humanizing the educational process.

- Career counseling must become an important function of the guidance program.

- Career Education programs must embrace the total curriculum.

- Teacher education programs must emphasize the "career development" process in their preservice programs.

- Teacher education must assume a responsibility in providing inservice training to local school personnel.

- The state leadership for Career Education should be shared between al education agencies.

APPENDIX A

ADVISORY COMMITTEE MEMBERS

ADVISORY COMMITTEE MEMBERS

J. Patrick Schmitt	Chairman, Guidance Dept. Minot Senior High School Minot, ND 58701
Richard Hauck	Counselor State School of Science Wahpeton, ND 58075
Glenn R. Dolan	Director, Guidance Services Executive Director N. D. Professional Guidance Assn.
Arlo Howe	Secretary North Dakota Assoc. of Secondary School Principals, Williston High School, Williston, ND
Wallace Osmon	Counselor Langdon High School Langdon, ND 58249
Lyle Sorum	Local Director of Vocational Education & member of the State Board for Vocational Education Williston Center - UND Williston, ND 58801
Ralph Scheer	Education Department North Dakota State Univ. Fargo, ND 58102
Lyle Evenson	Ass't Director of Guidance Serv. Public Instruction, Bismarck, ND
DeWayne Peterson	Employment Security Bureau Bismarck, ND 58501
Bob Stuckenbruk	Director, Special Education Bismarck Public Schools
Vic Solheim	Ass't Supt., Bismarck Public Schools
Don Stoxen	President-Elect, North Dakota Elementary Principals Assn. Dickinson, ND 58601
Harold Michelson	Director Secondary Education Dept. of Public Instruction Bismarck, ND
Gerald Roth	Ass't Director Elementary Educ. Dept. of Public Instruction Bismarck, ND 58501
Patricia Murphy	Home Economics Education, NDSU Fargo, ND 58102

APPENDIX B

VISITORS TO THE PROJECT

APPENDIX

VISITORS TO THE PROJECT

Dr. Polly Garrett	USOE/AVTE Denver, Colo.	1970 1971 1972 1973
Jerry Hasche	Fargo Public Schools Fargo, North Dakota	1970
Lowell Latimer	Minot Public Schools Minot, North Dakota	Spring 1971
Roger Olgard & Representatives	Fargo Public Schools Fargo, North Dakota	1971
LeRoy Swenson	OE/AVTE Denver, Colorado	1971
Paul Biegler	Watertown, South Dakota	Fall 1971
Elmer Lindstrom	Wishek Public Schools Wishek, North Dakota	Spring 1971
Bill Warner & Representatives	Stillwater Pub. Schools Stillwater, Minnesota	Fall 1971
Joan Lee Graf	Riverton Pub. Schools Riverton, Wyoming	Spring 1972
Valeri Hurst Ted James	General Learning Corp. Morristown, NJ	Spring 1972
James H. Carey	Great Falls Pub. Sch. Great Falls, Montana	Spring 1972
John Lacey	OE/AVTE Denver, Colorado	1972
Francis Hamilton	USOE Washington, DC	1972
Robert A. Mullen	Raleigh, N. Carolina	Fall 1972
Claude Sheldon & Representatives	Kennedy High School Kennedy, Minnesota	Fall 1972

Paul Wiedmeier & Representatives	Area Vocational Tech. School Rapid City, S. Dak.	Spring 1973
Leonore E. Hall	Grand Forks Pub. Sch. Grand Forks, N. Dak.	Spring 1973
Howard Hall & Representatives	Brunsville Public Sch. Brunsville, Minn.	Spring 1973

PROJECTS VISITED

New Orleans, Louisiana	1970
Oklahoma City, Oklahoma	1970
Cobb County, Georgia	1971
Cheyenne, Wyoming	1971
Pikeville, Kentucky	1971
Boise, Idaho	1972
Riverton, Wyoming	1972
Watertown, S. Dak.	1972

CONSULTANTS UTILIZED BY THE PROJECT

Ms. Lee Laws Education Service Center Austin, Texas	System-wide Workshop Elementary Princ. Conf.	August 1970 February 1971
Dr. Ken Hoyt Univ. of Maryland College Park, Maryland	Counselor's Workshop on Career Education Career Education Workshop	November 1970 March 1972
Dr. Wes Tennyson Univeristy of Minnesota Minneapolis, Minnesota	Inservice Workshop	March 1970
Dr. Cliff Helling Robbinsdale School Dist. Minneapolis, Minnesota	Inservice Workshop	March 1970

APPENDIX C

SUMMARY OF THE RESULTS OF THE CAREER DEVELOPMENT SUMMER INSTITUTE

INTRODUCTION

In March, 1972, the participants of the 1971 Career Development Institute were sent a cover letter and questionnaire regarding their summer experience. Data and information acquired from the questionnaires have been analyzed and are presented in the following.

Findings

Of the one hundred and eighty-one questionnaires mailed, one hundred and thirteen were returned by the respondents; four were returned because the envelopes lacked complete addresses. The percentages of questionnaires returned for boys, girls, and all participants were sixty-two percent, sixty-five percent, and sixty-four percent, respectively.

Table I contains the arithmetic mean and the number of observations for "boys", "girls", and "total" boys and girls for each of four questions regarding the summer experience of the participants. Responses to the first question were generally high thus giving an indication that the Institute programs appear to be relating training to the activities and the expectations for the various occupations included. Girls tended to rate this item higher than did boys.

Both boys and girls considered the Summer Institute more relevant than their high school experience. For this question, boys had a higher arithmetic mean than did girls. When they were asked to indicate the extent to which they were able to make more realistic choices of high school courses as a result of their five-week experience, boys and girls did not feel as positive as they did on the two previous items. As in question two, boys tended to rate the experience as being more valuable in assisting them in selecting high school courses than did girls.

The last question in Table I asked to what extent participants were better able to plan for their vocational future as a result of the Institute experience. Boys and girls were in close agreement in their mean response to this item. Both groups tended to feel that the Institute was of help to them in planning their vocational future.

In addition, Institute participants were asked to indicate which of the seventeen programs were involved in their future plans. For each group the frequencies were rank ordered from one to seventeen. For boys, Welding, Architectural Drafting and Estimating Technology, and Electrical were most frequently chosen; Dental Assistant, Environmental Science Technology, and Occupational Therapy were less frequently chosen. For girls, Practical Nursing, Occupational Therapy, Computer Programming, Dental Assistant, and Dental Hygiene were most frequently chosen; Electrical, Electronic Communication Servicing, Electronics, Environmental Science Technology, Machine Tooling, Mechanical Drafting Design Technology, Refrigeration, and Sheet Metal were not chosen. Most of the vocational choices appeared to fall within stereotyped male and

Table I

MEANS FOR PARTICIPANT RATINGS* ON FOUR QUESTIONS
PERTAINING TO THE INSTITUTE EXPERIENCE

	Boys		Girls		Total	
	Mean	N**	Mean	N**	Mean	N**
1. To what extent has the "Summer Institute" provided you with an understanding of the relationship between the training required for an occupation and the activities and expectations which are part of that occupation?	4.08	60	4.29	52	4.18	112
2. To what extent was the "Career Development Summer Institute" more relevant than your high school experience?	4.38	60	4.25	52	4.32	112
3. To what extent were you able to make more realistic choices of high school courses as a result of your five-week experience?	3.32	60	3.24	51	3.28	111
4. To what extent were you better able to plan for your vocational future as a result of your five-week experience?	4.00	60	3.98	52	3.99	112

*Ratings were made using five as high and one as low.

**N represents the number of observations.

female categories. Also, considering that approximately the same number of girls as boys returned the questionnaire, girls had disproportionately fewer choices than did boys.

Institute participants were asked to rate the seventeen programs with regard to two criteria: (1) the extent to which they enjoyed each program and (2) the amount of information acquired from each program regarding the world of work. The rankings for the "total" group tended to be consistent for the two criteria. The four programs with the highest rankings in both criteria were Welding, Graphic Arts, Machine Tooling and Computer Programming. The four programs with the lowest rankings on both criteria were Electronic Communication Servicing, Environmental Science Technology, Civil Engineering Technology, and Refrigeration.

In addition to asking whether or not the seventeen Institute programs were involved in the future plans, each participant was requested to indicate his (her) present vocational plans. Participant choices were categorized in the general groupings presented in Table II. Disproportionately more girls than boys planned to enroll in college, and disproportionately more boys than girls were undecided about their future. For both groups, a majority of the participants planned to acquire some type of vocational training.

Participants were permitted to write comments regarding the strengths and weaknesses of the Institute. The five strengths with the highest frequencies for the "total" group were: "Helped me in future planning" (14), "Very worthwhile and educational" (12), "Helped me socially" (11), "Gave an advantage in starting college" (9), and "Assisting in learning about vocations" (9).

The most frequent weakness as cited by Institute participants was "Not enough programs for girls" (7 girl respondents). Other weaknesses noted by at least two participants were: "Should have electives" (2), "Not enough social activity" (2), and "More time spent in each area" (2).

Conclusions and Recommendations

Based upon ratings and narrative comments of the participants, the Summer Career Development Institute appeared to benefit participants by assisting them in acquiring a better understanding of the world of work and in planning for their vocational future. In addition, the experience fostered several unanticipated benefits: preparing participants for college life, helping individuals learn how to meet and live with other young people.

Participants rated the seventeen programs much the same on the separate criteria of (1) amount of enjoyment and (2) amount of knowledge acquired from each program. In that regard, programs which were the most enjoyable also tended to be most informative about the world of work; those which provided least enjoyment tended to provide least information about the world of work. Institute administrators (with

Table II

FREQUENCY OF RESPONSES TO: AT THE PRESENT TIME MY PRESENT VOCATIONAL PLANS ARE

Choice	Boys	Girls	Total
Vocational Training	32	27	59
College	8	18	26
Undecided	13	3	16
Work	2	3	5
Military	4	0	4
Special Education	2	0	2
High School	1	0	1
Total	62	51	113

the help of the instructional staff) should evaluate programs which do not appear to be meeting participant needs. Based on the evaluation, weak programs could either be improved or could be replaced by more viable programs. More communication among instructors and the utilization of inservice programs might aid in the betterment of weaker programs.

When requested to make comments regarding the strengths and weaknesses of the Institute, participants tended to write responses which were positive but relatively general. The most frequent weakness was given by the girls. They felt that the Institute did not include enough female orientated experiences. This criticism is supported by the fact that they had disproportionately fewer choices than boys when they were asked which of the seventeen programs were involved in their future plans. A serious effort should be made either to include more female orientated programs at the State School of Science Institute or to establish a summer Institute-type experience at an institution which, because of its nature, is capable of providing programs more relevant to the vocational needs of women.

To provide additional evaluative data with regard to the impact of the Summer Institute, parents were contacted by letter and asked whether or not the Institute was meaningful for their son or daughter. Eighty-two of the one hundred seventy-seven parents who were sent letters responded by returning their comments. One letter was returned because the addressee was unknown.

Findings

The following two-part question was asked of all parents:

> Did the summer experience appear to be meaningful for _____ and in what ways did it appear to be meaningful?

Of the eighty-two parents who returned their responses, eighty indicated that the experience was meaningful (see Table III). Only one parent for the "boy" group and one parent for the "girl" group indicated that the experience was not meaningful.

Table IV contains the comments and frequencies given by parents indicating how the summer experience was meaningful for their son or daughter. The frequencies do not equal the total number of respondents since many parents gave multiple comments. The most frequent (29) reason given was: "Helped him (her) choose a career". Other reasons receiving high frequencies were: "Became acquainted with what college life is like" (23), "Learned how to meet and get along with people" (23), "Acquired a better understanding of the world of work" (13), and "Demonstrated an improved attitude toward high school and course work" (13). Of the twenty-three parents who said "Learned how to meet and get along with people", eighteen had sons attending the Summer Institute while five had daughters in the same program.

Table III

FREQUENCIES REFLECTING THE OPINION OF PARENTS REGARDING THE MEANINGFULNESS OF THE SUMMER INSTITUTE FOR THEIR SON OR DAUGHTER

Opinion	Parents of Boys	Parents of Girls	Total
Institute was a meaningful experience	47	33	80
Institute was not a meaningful experience	1	1	2
Totals	48	34	82

Table IV

FREQUENCY OF COMMENTS OF PARENTS REGARDING HOW THE SUMMER INSTITUTE WAS MEANINGFUL FOR THEIR SON OR DAUGHTER

Comment	Parents of Boys	Parents of Girls	Total
1. Helped him (her) choose a career	16	13	29
2. Became acquainted with what college life is like	11	12	23
3. Learned how to meet and get along with people	18	5	23
4. Acquired a better understanding of the world of work	8	5	13
5. Demonstrated an improved attitude toward high school and course work	8	5	13
6. Realized the importance of education	6	1	7
7. Became a more mature and responsible individual	4	3	7
8. Learned to live away from home	4	3	7
9. Decided what training and careers he (she) did not want to pursue	5	1	6
10. Became more confident in himself (herself)	3	1	4
11. Acquired an improved outlook on life and his (her) future	3	1	4
12. Assumed greater responsibility for his (her) decisions	1	1	2
13. Increased pride for his (her) home and respect for his (her) parents	1	1	2
14. Helped in choosing subjects	1	0	1
15. Realized the importance of rules and regulations	1	0	1
16. Helped make other training experiences easier	0	1	1

Parents who felt the summer experience was not meaningful for their son or daughter along with a few other parents made several critical comments regarding the program. The most frequent (3) criticism was made by parents who felt that there was not as many careers covered for girls as for boys. Three other comments followed the general theme implying that participants spent too much time running around and attending parties.

Conclusions and Recommendations

Considering the comments they made, parents viewed the Career Development Summer Institute as a worthwhile experience for their sons and daughters. Based upon their reactions, every effort should be advanced to expand this program to include as many students as possible.

The benefits to be received by the participants of the Institute were not restricted to career-associated benefits. The impact of the Institute in helping individuals become more socially-effective, better high school students, and more mature and responsible was outlined by the findings presented earlier. This was especially important for boys as compared to girls.

Institute administrative personnel should examine the possiblity of including more programs which are relevent to female occupational preferences. Such an effort would not only provide girls with more vocational avenues but also serve to acquaint boys with a larger number of "female" occupations.

Finally, when applications are processed, the parents of applicants should know the exact nature of the Institute and of the individual freedom which is built into such a program. If the parents realize the importance of having participants assume responsibility for themselves, fewer parents will criticize the Institute for fostering a "party-orientated" atmosphere.

APPENDIX D

DAY-ON-THE-JOB

CAREER DEVELOPMENT PROGRAM

A Day On the Job

One of the major responsibilities of the career development program in the Bismarck School System is to provide every young person with the educational opportunities that will enable him to develop to his full potential. Certainly, the in-school activities that are being developed account for a portion of this opportunity. However, providing an opportunity to explore the knowledge, skills, technical requirements, and working conditions of career fields through work experience and observation is even more essential.

A Day On the Job is a program designed to offer students an opportunity to work with and observe a typical days work in a career field that matches his interests and aptitudes.

Basically, the objectives of such a program are threefold:

1. To assist students in determining career goals and life styles.
2. To assist students in planning and implementing appropriate educational programs.
3. To offer students the opportunity for work observation and learning that will enhance the decision making process and eventually a wiser career choice.

A Day On the Job will not make students experts in careers, nor will it prepare them to make definite commitments. It should, however, broaden their horizons and give them insight for planning their goals with fewer frustrations or dead-end starts.

CAREER DEVELOPMENT PROGRAM

A Day On the Job

Offering students observational and "hands-on" experiences is the basic purpose of A Day on the Job. However, during the course of the day, we hope that answers to the following questions will be provided:

1. Do you like your work? Why?
2. What are the basic responsibilities of your job?
3. How important is cooperation in your work?
4. What education and training is necessary?
5. Is communication important in your work?
6. What is the future in this type of work?
7. What was your previous work experience?
8. What course work would you suggest for the student as he enters high school?
9. Of what importance are aspirations?
10. What are the job opportunities in this community? North Dakota? Nationwide?
11. Is your work or what you earn most important? Why? What are the projected earnings of this type of work?
12. Did you have a specific goal as you pursued your experience and training? Did your goals change? Did you reevaluate them from time to time?
13. Was your job selection made on the basis of your interests and abilities?

A DAY ON THE JOB

1. Our firm would be willing to offer students observational experiences through A DAY ON THE JOB.

   YES ____

   NO ____

2. Name of firm _____

3. Contact person _____

4. List of occupations at your firm:

   A.

   B.

   C.

   D.

   E.

   F.

5. Number of students you could handle _____

6. Other comments:

APPENDIX E

LIST OF PUBLISHED MATERIALS

LIST OF PUBLISHED MATERIALS

The following materials have been published as a part of the project:

- Special Education Classroom Activities Guide
- Kindergarten Classroom Activities Guide
- First Grade Classroom Activities Guide
- Second Grade Classroom Activities Guide
- Third Grade Classroom Activities Guide
- Fourth Grade Classroom Activities Guide
- Fifth Grade Classroom Activities Guide
- Sixth Grade Classroom Activities Guide
- Secondary Math Classroom Activities Guide
- Secondary Science Classroom Activities Guide
- Secondary English Classroom Activities Guide
- Secondary Social Studies Classroom Activities Guide
- Secondary Home Economics Classroom Activities Guide
- Secondary Art, Business, Industrial Arts, Physical Education, Classroom Activities Guide
- World of Work in Music, Teachers Guide
- Summary of Governor's Conference on Career Education
- Administrator's Guide for Implementation of Career Education
- Planning for Career Education - Bridging the Gap Between School and work

APPENDIX F

SELECTED SAMPLE ACTIVITIES

General
(Immediate Neighborhood)

CAREER DEVELOPMENT ACTIVITIES

BROAD OBJECTIVE: To present appropriate occupational information about the world of work.

SPECIFIC BEHAVIORAL OBJECTIVE: Given a set of posters the children can tell what the worker brings to the home.

SUGGESTED SUBJECT AREA Social Studies

SUGGESTED GRADE LEVEL K

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
Select a poster from set of community workers and tell what he brings to the home. Take part in discussion of various community workers who come to the home. Prepare a bulletin board entitled "Workers Who Come to Our Home" a) use pictures from magazines b) draw or paint some of the pictures. Learn songs "Paper Boy" and "The Milkman." Do a choral reading of "Workers" (poem). After reading this poem children can dress up, wear hats or carry a product for identification.	1. Have set up Community Workers posters. List may include milkman, garbage man, mailman, plumber, meter reader, paper boy. 2. Collect pictures from magazines and prepare own set of pictures. 3. Encourage critical thinking by asking: Why do you suppose the milkman delivers milk to the home when it can be bought in a grocery store? 4. Teach song "Paper Boy" and "The Milkman" to tune of "Farmer in the Dell." 5. Have a "paper boy" deliver papers down class streets while the children sing.	Teaching Pictures: Home and Community Helpers Cook Have You Seen My Brother?, Guilfoile, Elizabeth. Follett Publishing Co. Songs: "Paper Boy" (attached) "The Milkman" (attached) Poem: "Workers" (attached)

SUGGESTED CORRELATION FOR THIS ACTIVITY:

PAPER BOY

Down the street he goes
And back the other side.
A paper here, a paper there,
As on and on he rides.
Oh, paper boy, paper boy,
Leave a paper at my door.

THE MILKMAN

I've never seen the milkman,
I've never seen his store.
Yet every moring he will leave,
Two quarts before my door.

(Ask, "Why don't you see the milkman?)

WORKERS

All: Community workers all, are we;

Individual: Policeman, fireman, nurses are three.

All: Many others do we know;

Individual: Mailman, milkman, breadman, oh;

All: All of us help our town to grow.

CAREER DEVELOPMENT ACTIVITIES

BROAD OBJECTIVE: To develop positive attitudes toward the World of Work.

SPECIFIC BEHAVIORAL OBJECTIVE: To demonstrate student's knowledge of parent's occupation, the students will name three tools that his parent uses in his work if that number is available.

SUGGESTED SUBJECT AREA Language Arts

SUGGESTED GRADE LEVEL 1

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
1. Parent bags: Use child decorated paper bags to bring tools (or a tool) of either parent's occupation to show and explain their work.	1. Discuss work and workers and how each worker is very important.	1. Paper Bags Construction paper, crayons, tempera paints, colored chalk, paste.
2. Have students take these home and have their parents put tools into bag and explain to them what each is used for.	2. Discuss how certain tools that their parents use makes work easier. (example of tool) Do same for teacher (ruler) and student (pencil).	2. Egg Beater (mother) Pencil (student) Ruler (teacher)
3. Child brings daddy or mommy bags back to school and explains to the rest of the class what his father's or mother's job title is, tools used and how used.	3. Discuss how their fathers need certain tools in their work.	
	4. Fold paper in half vertically and draw mother and father working at their jobs; mother on one side and father on other.	
	5. Equalize the importance of Mother and father role in home such as for the cases where a mother or father is not in the immediate family or home situation. Discussion on this necessary.	

SUGGESTED CORRELATION FOR THIS ACTIVITY: Can be included in areas of Social Studies, Art and Science.

CAREER DEVELOPMENT ACTIVITIES

BROAD OBJECTIVE: To acquaint the students with some of the psychological and social satisfactions that may be gained from work.

SPECIFIC BEHAVIORAL OBJECTIVE: After completion of this activity the students will be able to list at least ten job satisfactions other than money.

SUGGESTED SUBJECT AREA Language Arts

SUGGESTED GRADE LEVEL Jr. - Sr. High

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
Have students list those satisfactions that they need most as a reward in their present lives.	1. Discuss with the students the various rewards that "work" or meaningful work can provide. 2. Hand out attached sheet for students to use as a guide for considering satisfactions that work can provide. 3. Discuss some of those not considered previously. 4. Have students use the list as a guide in self-evaluation. (As a basis of this the students may more realistically make vocational choices on the basis of their own needs.)	Attached sheet for checklist Filmstrips/cassettes from Guidance Associates: "Why Work at All" "Trouble at Work" "Liking Your Job and Your Life" Booklets from Science Research Associates: "Understanding Yourself" #5-153 "You and Your Abilities" #5-1177 "Choosing a Career" #5-156 Adventures for Readers, Book Two "George Washington Carver", Means Exploring Literature, "A Summer's Reading", Bernard Malamud Quotation: "To do nothing is the way to be nothing.", Nathaniel Howe

SUGGESTED CORRELATION FOR THIS ACTIVITY: Adventures for Readers, Book Two, "The Countess and the Impossible", Thu[illegible]n
"Incandescent Genius", C. B. Wall

What are some of the *psychological and social satisfactions* that may be gained from work? The following list may impress you with the need to consider such satisfactions in choosing an occupation or seeking a job:

Liking the work you do
Using your capabilities
Feeling suited to your work
Working with numbers
Working with words
Working with things
Working with your hands
Working fast
Working slowly
Doing precise work
Doing things skillfully
Doing things others can't do
Competing with others
Doing routine work
Always knowing what's next
Doing a variety of things
Encountering unexpected tasks
Being creative or original
Gaining esthetic enjoyment
Dealing with people
Influencing people
Dealing with ideas
Being challenged intellectually
Mastering an area of knowledge
Knowing why you're doing something
Seeing the product of your work
Enjoying daily accomplishment
Releasing energy through activity
Moving about at your work
Traveling as part of your work
Running occasional risks
Feeling safe from accidents
Having convenient working hours
Working in pleasant surroundings
Eating good food
Having time and energy for other activities
Doing an honest day's work
Sensing order in your life
Feeling sure of keeping your job
Feeling independent
Having responsibility
Not having responsibility
Feeling useful and needed
Getting attention
Being judged fairly
Being treated like a person
Having your work praised
Feeling proud of yourself
Being able to express your ideas
Feeling self-confident
Feeling important
Having authority over others
Telling others what to do
Being told what to do
Doing things on your own
Exercising leadership
Being promoted
Being a member of a group
Being with other people
Working by yourself
Talking to co-workers
Talking to others
Liking your co-workers
Being liked by co-workers
Feeling loyal to others
Helping other people
Doing work of value to society
Feeling part of something big
Feeling enthusiastic
Feeling morally worthy
Achieving your ambition
Making your family proud of you
Gaining prestige in your community
Becoming well known

Manolovitz

CAREER DEVELOPMENT ACTIVITIES

BROAD OBJECTIVE: To acquaint students with the vocational groupings: 1) working with people, 2) working with ideas, 3) working with hands and tools.

SPECIFIC BEHAVIORAL OBJECTIVE: By evaluation of working preferences - working with people, ideas, and tools, the student will compare them, in writing, to his job preferences.

SUGGESTED SUBJECT AREA Any/Social Studies

SUGGESTED GRADE LEVEL Jr. - Sr. High

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
Evaluate each occupation in terms of: a. if the worker deals mostly with people b. if the worker deals mostly with ideas c. if the worker likes to work with his hands and tools Add to list - occupations which interest students. Have student evaluate whether or not his job preference is compatible to his personality working with a) people, b) ideas, c) tools.	After activity, have students evaluate the suitability of his job qualifications to the occupational requirements (keep in mind the three working preferences).	Vocational Grouping (attached) Widening Occupational Roles kit SRA

SUGGESTED CORRELATION FOR THIS ACTIVITY:

VOCATIONAL GROUPING

Some workers prefer to work mostly with other people. They like to try to persuade them to buy something or to make them happy or to make them feel better. Other workers prefer to work with ideas, to think up new things or to solve problems. Still other workers prefer to work with their hands and with tools.

Can you figure out which workers deal mostly with people, or ideas, or things. Put a (P) after the worker who deals mostly with people, and (I) after the worker who likes to work with things like his hands and tools.

EXAMPLE: Artists __I__ Cabinetmaker __T__ Doorman (hotel) __P__

Actor	_____	Draftsman	_____	Nurse	_____
Air traffic controller	_____	Editor	_____	Oceanographer	_____
Pilot	_____	Electrician	_____	Optometrist	_____
Stewardess	_____	FBI agent	_____	Plumber	_____
Architect	_____	Florist	_____	Policeman	_____
Automobile salesman	_____	Geologist	_____	Radio or TV announcer	_____
Beautician	_____	Insurance agent	_____	Teacher	_____
Carpenter	_____	Mathematician	_____	Truck driver	_____
Chef	_____	Miner	_____	Waitress	_____

CAREER DEVELOPMI ACTIVITIES

BROAD OBJECTIVE: To acquaint students with the major occupational fields. (To precede unit on "Research for an Occupation.")

SPECIFIC BEHAVIORAL OBJECTIVE: Each student will know how to use the Occupational Outlook Handbook by selecting three careers and reporting on training required, employment outlook, and sources of additional information.

SUGGESTED SUBJECT AREA English

SUGGESTED GRADE LEVEL Jr. - Sr. High

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
Acquaint students with major job classifications according to the Occupational Outlook Handbook: 1. Professional, managerial, and related occupations. 2. Clerical and related occupations. 3. Sales occupations 4. Service occupations 5. Skilled and other manual occupations. 6. Major industries and their occupations. 7. Occupations in agriculture 8. Occupations in government	This activity could be incorporated into the library unit. Discuss the Occupational Outlook Handbook with students. Read reports from brochures, occupational briefs, and books. Notebooks or collection of materials about occupations of students choice. Student interviews with workers. Guest speakers. Have each student write a theme discussing three careers which might be of interest to him using the Occupational Outlook Handbook as a guide. Have students write a term paper on selected occupations.	Speakers from occupational fields. Occupational Outlook Handbook Dictionary of Occupational Titles Government agencies Department of Labor U. S. Office of Education Career Kits

SUGGESTED CORRELATION FOR THIS ACTIVITY:

CAREER DEVELOPMENT ACTIVITIES

BROAD OBJECTIVE: To acquaint students with general characteristics of people in mathematics.

SPECIFIC BEHAVIORAL OBJECTIVE: Each student will list four characteristics of people in mathematically orientated jobs and will relate these characteristics to himself.

SUGGESTED SUBJECT AREA Math

SUGGESTED GRADE LEVEL Jr. - Sr. High

ACTIVITY	SUGGESTED TECHNIQUE	RESOURCE MATERIALS
Identify characteristics that fit the image of a mathematician	Duplicate and hand out for discussion the following: S. R. A. Jobs In Mathematics #8 P. 7, "The Ties that Bind." Qualities common to all mathematics 1. Method - system of logic in order to reach conclusion. 2. Symbolism - all people can easily read and results are concise and clear. 3. Pattern - finds order amongst chaos. 4. Beauty - Rhythm and order are pleasing wherever they exist. Have each student list the above qualities and tell how he does or does not identify with them.	S. R. A. Jobs In Mathematics #8 Mathematicians Staticians Occupational Outlook Handbook Occupational Guidance kit Finney Company - Minnepolis,Minn.

SUGGESTED CORRELATION FOR THIS ACTIVITY:

APPENDIX G

FIELD TRIP GUIDELINE

FIELD TRIPS

Guidelines:

I. Set up plans:

A. Plan type of trip
Are students interested in going?
Is trip justifiable? (Can classroom provide same learning?)
Reason for taking trip:
1. Develop awareness of different workers
2. Helping them observe working conditions
3. Awareness of interdependence of workers.

B. Preparation

1. Permission from principal
2. Plans for transportation
3. Permission slips
Develop form-sheet for the tour of business place
4. Contact business tour establishment

a. Permission to come and definite date and time
b. Information given them
1. Number of children
2. Age and grade level
3. What material covered by children previously
4. Questions they might ask
5. Workers children may question
6. Do you have materials you would like us to go over beforehand or hand out on tour?
7. Safety measures to be observed

C. Pupil/Teacher Preparation

Watch for:
1. Working conditions
2. Training of workers
3. Duties of workers
4. Clothes they wear - appropriate
5. Numbers of workers
6. Safety
7. Do they like this work?

Our preparation for trip:
1. Appropriate clothing
2. Safety - conduct on tour
3. Courtesy (going and at tour base)
4. Departure time

D. Follow-up

1. Did you enjoy the trip and would you recommend trip to others? Why? Why not?
2. Discuss observations (C)
3. Were all your questions answered?
4. Which of these workers would you like to be?
5. What did you learn on this trip that you didn't learn in classroom?

APPENDIX H

RESOURCE PEOPLE GUIDELINES

RESOURCE PEOPLE GUIDELINES

Preparation:

1. Make the initial contact.

2. Teacher should obtain background information on person so she can make the introduction.

3. Provide information to the speaker describing the type and number of students, the program, facilities and equipment you can provide, things to cover, etc. (Letter for this purpose attached - Form xx)

4. Cover the area concerning the resource person before he or she comes to the classroom.

5. Give students some general knowledge of this person's field.

6. Talk about questions that they wish to have answered (general). Have these organized so that all questions can be asked without repetition.

7. If question period lags the teacher should ask questions to bring out things that haven't been covered thus far.

Form xx

Dear _____:

My students are studying _____.
We would like to have some firsthand knowledge about this area. We are very interested in the work that you do at your job. Below are listed some areas that we would like to have included in your talk to the class.

1. Title of job.
2. Duties.
3. Training or preparation required.
4. Approximate starting salary - salary after ten years (average).
5. Have you been doing this same type of work all of your working life?
6. Demand for such a job.
7. Supply of workers for this occupation.
8. Physical characteristics needed.
9. Social characteristics needed.
10. Do you work alone or with others?
11. Do you need to get along and cooperate with other workers?
12. What school courses helped a great deal in preparing you for this work?
13. How do you feel after a day's work? Why?
14. Why do you work?
15. Do you like this job?
16. What are the good and bad points about it?
17. How and where training can be obtained.
18. Leave plenty of time for questions.

Listed below is some information you may find useful.

Grade _____
Number of students _____
Description of facilities and equipment available _____
_____

Thank you very much for consenting to spend some time with our class.

Sincerely yours,

Teacher

Follow-Up

1. Discuss things they learned from visit (what do they know now about this job that they did not know in the past).

2. Discuss:

   a. Is this person's work useful? How?

   b. Would you like this type of work?

   c. What characteristics do you have that would be valuable in this work?

   d. What must you improve on if you were to go into this line of work?

APPENDIX I

COMMUNITY RESOURCES QUESTIONNAIRE

COMMUNITY RESOURCES QUESTIONNAIRE

The Career Education Advisory Committee is studying various ways of enriching the educational program of the _____ schools. One way to widen the students' educational opportunities, particularly in learning work skills, is to use the resources of the community. The purpose of this questionnaire is to find out what interests and talents the people of _____ would be willing to share with their young people. Once this information is on file, then it will be possible to match up an individual's special skill with a student's particular interest. Would you be willing to have this questionnaire kept on file at the _____ School so that in the event of a particular need or interest, you might be contacted? Yes ___ No ___

NAME _____

ADDRESS _____ PHONE _____

FIELD OF INTEREST (Cite occupation or industry, arts and crafts, science, public service, business, trade union)

_____

SPECIAL SKILLS: _____

WHAT SIZE GROUP WOULD YOU LIKE TO WORK WITH?

_____ (Large: 20 plus) _____ (Medium: 5-20)
_____ (Small: 2-5) _____ (Individual: 1 to 1)

HOW MUCH TIME WOULD YOU BE WILLING TO GIVE?

_____ Once a Week _____ Number of Hours
_____ "Hands On" training (every day over a period of several weeks)
_____ Occasional (lecture or demonstration for a specific topic)
_____ Other

CAN YOU VOLUNTEER YOUR SERVICES? _____ IF NOT, TENTATIVELY HOW MUCH WOULD YOU EXPECT TO BE PAID? _____

I understand that this information is merely exploratory and does not bind me in any way. If there is a need for, or interest in, my services, I shall be contacted and further arrangements will be made.

Signed _____

Please return completed questionnaire to the person who gave it to you - or to John Doe
Career Education Advisory Committee
Post Office Box 707, Random Town, U.S.A.

APPENDIX J

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